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FINAL

ENVIRONMENTAL ASSESSMENT

FOR

BORDER ROAD MAINTENANCE & REPAIR

NACO, COCHISE COUNTY, ARIZONA

Prepared for:
Joint Task Force Six
Fort Bliss, Texas

Prepared by:
U.S. Army Corps of Engineers
Los Angeles District

February 1993

FINDING OF NO SIGNIFICANT IMPACT

FOR

BORDER ROAD MAINTENANCE & REPAIR

NACO, COCHISE COUNTY, ARIZONA

I have reviewed the attached Environmental Assessment (EA) prepared by the U.S. Army Corps of Engineers (COE), Los Angeles District (LAD) for the Joint Task Force Six (JTF-6) project in the vicinity of Naco, Arizona. Established by the Secretary of Defense on 13 November 1989, JTF-6 plans and coordinates Title 10 Department of Defense support to Federal, state and local law enforcement agencies as requested by Operation Alliance and approved by the Joint Chiefs of Staff to disrupt illegal drug smuggling operations along the southwest land border and to protect national security.

The purpose of the JTF-6 Operation in Naco, Arizona, is to provide routine maintenance to the existing road along the U.S.-Mexican Border. The Border Patrol does not have the equipment or personnel to adequately maintain this road.

1. Description of Proposed Action:

The proposed project consists of 22 miles of an existing road east and west of Naco, Arizona. The road maintenance will consist of light scraping, installation of culverts, grading and shaping for drainage, and placing gravel in several washes. Project construction will take about 30 days, and is scheduled to be accomplished between February and the end of March 1993. There may be deviation from the proposed construction schedule due to funding or availability of the military personnel; however, project construction will be accomplished prior to April 1994. In the event of delay, resource agencies and concerned individuals will be notified by telephone. In the event of flooding or heavy rain, project construction will be postponed until conditions in the washes are again suitable for the movement of equipment and material.

2. Environmental Impact Analysis:

The analysis of potential environmental impacts is documented in the EA for the Joint Task Force Six Operation, Road

Maintenance at Naco, Arizona. All environmental commitments in the EA will be followed.

Climate: There will be no effect on the climate in the project area.

Water Quality: No perennial streams are found in the project area. Any work to be accomplished in the vicinity of the San Pedro River area will be coordinated with the Bureau of Land Management and agreed to in writing beforehand. Gravel and culverts will be placed in several washes to improve the road in those areas. All work will stop during heavy rains and will not resume until conditions are suitable for movement of equipment and material.

Air Quality: Some small amount of exhaust emissions and particulates will be released to the atmosphere during construction. To reduce dust particulates a truck spraying water will be used as needed. To reduce exhaust emissions construction vehicles will be maintained per normal standards and the vehicles will only be in any one area for a short time (one to two weeks, at most). Air quality is not expected to be degraded by the proposed project.

Vegetation: The majority of the activity will take place on the existing roadbed. At the borrow site, disturbance will be limited to the previously disturbed area and the grassy area on the west side of the hills, avoiding the sensitive botanical area. For the entire length of the project, impacts to existing vegetation are anticipated to be minimal and will be limited to those areas that must be disturbed for road maintenance or improvement. Most of the impacts to vegetation will be at the road edges and of short duration. With the construction constraints listed in the EA, there will be no impact on the agave plants used as a food source by the lesser long-nosed bat.

Fish and Wildlife: The proposed action will have little impact on wildlife in the area. Some wildlife may experience minor, temporary disruption, but this is expected to be very short-term and not significant.

Threatened and Endangered Species: The project is not expected to impact any Federally listed threatened or endangered species. With the construction constraints in this Environmental Assessment, the project will have no impact on the lesser long-nosed bat.

Cultural Resources: The project will not result in adverse impacts to the cultural resources of the project area. Monitoring of the project by Corps archaeologists will insure that any known or discovered site will be protected under Federal and state laws.

Land Use: The land use in the project area will not be altered by project construction.

Aesthetics: The look and lay of the land will not be changed by this project.

Noise: There will be minor, short-term noise intrusions in the area where the machines are working. This effect will move with the equipment and therefore will have little impact in this rural area.

Socioeconomic: The project will have a positive short-term economic effect on the local economy as a result of the construction crew's residence in the Douglas area for approximately 30 days. The long-term socioeconomic status of the area, however, will remain unchanged.

Transportation: Roadways to be repaired are not generally used by the public. A very short term impact will be present on the highways in the area while the machines are transported to the work areas from Fort Huachuca.

3. Conclusion:

A review of this Environmental Assessment and coordination with the appropriate agencies indicate that the actions, as proposed by the Joint Task Force Six Operation, will not have significant impact on the quality of the physical or biological environment. All requirements of the National Environmental Policy Act (NEPA) have been satisfied. Therefore, preparation of an Environmental Impact Statement (EIS) is not required.

3 Feb 1993
DATE

John M. Pickler
JOHN M. PICKLER
Brigadier General, U.S. Army
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1.0 PROJECT SUMMARY

The Secretary of Defense established Joint Task Force Six (JTF-6) in November 1989 to coordinate all Department of Defense support to Federal, State, and local law enforcement agencies in their efforts to disrupt illegal drug traffic along the southwest border and protect national security. Under this direction, JTF-6 has requested that the Los Angeles District, U.S. Army Corps of Engineers (COE) assess impacts of the maintenance and repair of existing road along the border of the United States and Mexico in the vicinity of Naco, Arizona, to permit faster response time and increased safety for the Border Patrol while accomplishing their mission.

R This document consists of an Environmental Assessment (EA) of the maintenance and repair actions proposed for the drag road (hereafter referred to as "road") utilized by various law enforcement agencies in this area. These proposed actions are primarily designed to repair the roughest portions of the road, but also to upgrade the general condition of the entire roadway. This EA has been prepared to assess any environmental concerns associated with this proposed action. It provides the required National Environmental Policy Act (NEPA) documentation.

The proposal includes limited repairs and improvements to the existing road, grading to smooth out rough surfaces, and the installation of several culverts on about 22 miles of existing road at the United States/Mexico border near Naco, Arizona. The proposal does not include widening the road. A detailed project description is included in section 4.0 of this EA. It is estimated that road improvement will take about 30 days to
R complete. Project construction is scheduled to commence between the first week of February 1993 and end of April 1993. However, due to funding limitations and/or availability of construction personnel the work may be delayed. If that should occur the work then would be accomplished prior to April 1994. JTF-6 will avoid construction in the event of heavy rain or floods to reduce any impacts to water quality. If there is a delay in the project construction, the appropriate resource agencies and concerned individuals will be notified via the telephone.

Impacts from this proposed action are very minimal and short term. Most movement of soils and other materials will primarily be confined to the present roadway imprint. Temporary storage of earthmoving equipment will take place in areas that have been disturbed in the past. Base camps will be established on disturbed areas. Monitors will be utilized in any area that contains sensitive resources.

2.0 PROJECT LOCATION AND VICINITY

The small Arizona town of Naco is located approximately 103 miles, via I-10 and U.S. Route 80, southeast of the City of Tucson. It is approximately 33 miles, via U.S. Route 80, west of the town of Douglas (See Map 1). Bisbee, the seat of Cochise County, is the nearest large town and is about 10 miles north of the project area. Sierra Vista is the nearest city and it is about 20 miles north of the project area. To the immediate west of the proposed project area is the Coronado National Memorial.

3.0 NEED FOR THE PROPOSED ACTION

The purpose of the JTF-6 Naco operation is to coordinate military operations in support of counter-narcotics activities by Federal, State, and local law enforcement agencies, as requested by Operation Alliance and approved by the Secretary of Defense. The proposed action is to improve about 22 miles of road for various law enforcement agencies' (the Border Patrol, the Immigration and Naturalization Service, the Arizona Department of Public Safety and the Cochise County Sheriff) access and use. These actions are needed in order to effectively monitor, patrol, spot and intercept illegal smuggling/narcotics trafficking, and to protect agents' lives in the vicinity of the United States/Mexico border. Present conditions are such that regular four-wheel-drive vehicles can utilize these roads, with extreme caution in several areas, in dry weather. Stabilizing of these areas is needed to improve the Border Patrol's ability to detect and more rapidly interdict illegal drug traffickers. Overland smuggling poses a significant threat in this area.

4.0 PROPOSED ACTION

4.1 Road maintenance and repair. The proposed project is to repair approximately 6.5 miles of road east of and approximately 15.4 miles of road west of the town of Naco (See Map 2). The existing location and width of the road defines the area proposed for this work. Drainage ditches adjacent to the road will be cleaned and repaired. Culverts and/or gabions will be installed where appropriate in and around some of the washes. It is estimated that it will take about 30 work days for the entire project. The road will be improved to its existing width, which varies from 10 to 30 feet along its length. Temporarily, some additional area may be disturbed along narrow roads or where culverts will be installed or repaired (see Section 7.5.1 for details).

Three wash crossings on the east road and four wash crossings on the west road are proposed to be repaired by installing erosion control materials, such as corrugated steel pipe, sand bags and/or railroad ties. Several sites have been

surveyed for their suitability to be used as temporary parking areas for the construction equipment. Borrow site(s) may be needed for construction materials; one possible site is located next to the road in the limestone hills south of Bisbee Junction. If additional materials are needed they will be obtained from local sources.

The area where the road crosses the San Pedro River is under the jurisdiction of the Bureau of Land Management (BLM), as the "San Pedro Riparian National Conservation Area". The Conservation Area is comprised of the land from 1/4 of a mile west of Border Post 98 to 1/2 of a mile east of Border Post 97. Within this Conservation Area it has been proposed that two washes, approximately 1 mile east of the river, be repaired.
R Written agreement has been submitted to BLM for signing, by JTF-6. Copies of the signed agreement will be on file in BLM, COE and JTF-6. The remainder of the road within the Conservation Area will not be repaired.

It is anticipated that the first project maintenance actions would take place on the east road segment, followed by the west
R road segment. These construction activities are expected to take place between early February and the middle of April 1993. However, should funding, weather or availability of military personnel delay this proposed project, construction may not be accomplished until the Spring of 1994. In case of delay, the Corps of Engineers Staff will notify to appropriate resource agencies and concerned individuals by telephone.

Army equipment expected to be used includes: one bulldozer, one earthscraper, two earthgraders, one vibration roller and one
R water spraying truck. This equipment will be transported from Davis-Monthan Air Force Base, near Tucson, on flat-bed trucks. Additional locally rented equipment may be needed as the work progresses.

This project construction will be accomplished by approximately 130 military personnel (including support staff). This work will constitute a portion of their training for the year.

A Base Camp will have already been established for this work crew in the Douglas area. It is anticipated that this camp will continue to be used while the personnel work on the Naco road segments. This camp will contain most of the materials needed to sustain this work force for the duration of the project. It will contain tents and/or spaces for the following functions: sleeping, kitchen, dining, laundry, lavatory, maintenance, etc. Solid and liquid wastes will be disposed via local contractors. Foods, fuels and other consumable items will be acquired from Fort Huachuca or the local area. Electricity will be produced by generators on site.

R In the work site areas the earth moving equipment will remain and will be protected during nonworking hours by sentries. The construction people will also remain overnight in the vicinity of the equipment. Food and other necessities will be delivered to these people from the Base Camp.

5.0 ALTERNATIVES

5.1 No Action. This alternative would not allow for any upgrading or construction activity to take place on this road. The road would remain as it is, and the Border Patrol would have to utilize the road as best as possible with the equipment at its disposal.

This alternative would, over time, cause a deterioration in the law enforcement agencies' ability to fulfill their mission. As natural environmental forces weather and erode the road area it will become increasingly difficult for these agencies to utilize this road. If this were to happen it could reasonably be expected that illegal traffic across the border would increase.
R As a result, this alternative is not acceptable and will not be fully addressed in this document.

5.2 Proposed Construction. This alternative would allow for the maintenance and upgrading activities on the present road as proposed in Section 4.0 above. The road would be improved and therefore increase law enforcement access to the more remote areas in the border area. This is the Preferred Alternative.

5.3 Construction of a New Road. Construction of a new road would require land and/or right-of-way clearance, as well as engineering planning and construction implementation. This alternative would require several years to develop a project design and would be very costly. The local flora and fauna would be greatly impacted. This proposal would be more environmentally damaging than the Preferred Alternative.

6.0 AFFECTED ENVIRONMENT

6.1 Physical Setting. The region is part of the Basin and Range Physiographic Province of the western United States. The project area is part of a gently sloping valley surrounded, for the most part, by mountains of medium height. The nearest mountains, and immediately north of the project area, are the Mule Mountains. The highest U.S. peak in the area is Huachuca Peak, with an elevation of 8,406 feet. Elevations in the project area range from 4,200 to 4,800 feet above mean sea level.

6.2 Climate. Climate in the Naco region is characterized by mostly sunny days with hot summers and mild winters. Precipitation normally is highest in summer, due to moisture from

the south, and in winter, due to low pressure systems from the west. Average annual precipitation is approximately 15 inches. Annual snowfall can vary from none to about 6 inches.

Temperatures normally vary, in the winter, from lows in the upper teens to highs in the 60's or 70's. Summer temperatures can vary from lows in the 60's to highs in the low 100's. Winds for most of the year generally blow from the south and east.

6.3 Water Quality. Due to the dry climate of this area most of the drainage channels are dry most of the year. The San Pedro River is the one exception; its flow is discontinuous and is controlled by variations in water table depth, precipitation and spring flow. The direction of most of the surface drainage in this area is south to north, i.e. Mexico into the United States. Since lands on both sides of the border are utilized primarily for grazing cattle, there are few sources of contaminants in the area.

R There is a large copper mine located near the Mexican town of Cananea which is situated partially in the extreme headwaters of the San Pedro River basin. Documented discharges of contaminants originating from the mine caused widespread pollution of the river in the 1970s and 1980s. All aquatic life was destroyed and many pollutants remained in the streambed sediments for years and may still persist although routine surface water quality monitoring data does not confirm this. (This information provided by the ADEQ, letter dated January 19, 1993, see Appendix D.)

Surface water quality of the San Pedro River in the vicinity of the border is good. However, three violations were detected
R during monitoring in Water Year 1988 at the Highway 92 bridge near Palominas. This monitoring indicated that the water may have been contaminated with copper, lead and boron as the river entered the U.S. However, these samples were collected during a flash flood event and may not represent overall water quality (State of Arizona, 1989). The boron value is suspect and may be the result of sample contamination by the laboratory. Additional violations for turbidity have been noted in water years 1991 and 1992. (Some of this information provided by the ADEQ, letter dated January 19, 1993, see Appendix D.)

Ground-water in the area is good, per a conversation with a representative of the Arizona Department of Water Resources. Almost all of the water consumed locally is from wells. Various water companies serve the south county area.

6.4 Air Quality. The project area has good air quality due to the rural nature of the region. Several possible sources of pollution are located on the Mexican side of the border. One

processing plant is about 1 mile east-southeast of the town of Naco and another plant(s) located near the Mexican town of
R Cananea, about 30 miles southwest of Naco. Weather patterns are such that stack emissions do not often foul the air in the Naco area.

6.5 Biological Resources

6.5.1 Vegetation. Vegetation in the project area is predominantly semidesert grassland and Chihuahuan desert scrub. Biological investigations of the road maintenance and improvement project were conducted to inventory and evaluate the effects of the project on biological resources. The alignment was studied on November 4 and 6 and December 1, 1992. The area is dominated primarily by low shrubs and grasses. Dominant and common shrubs include creosote bush, snakeweed, desert broom, white-thorn acacia, yucca, and sotol. Mesquite is scattered throughout the project area and becomes common along the lower lying drainages. Lehmann's lovegrass, introduced from Africa for erosion control, is the dominant grass in the project area. Other common grasses include sacaton, grama grasses, sprangletop, and Johnson grass. The semidesert grasslands plant communities of the southwest are described in Brown (1982:123-131), Humphrey (1958), and Martin (1975). Riparian woodland is well-developed in the flood-plain of the San Pedro River. Fremont cottonwood and Gooding willow are the dominant riparian species. Table 1 lists the plant
R species (including scientific names) identified in the project area.

R Table 1. Plant Species Identified in the Project Area

Acacia constricta	white-thorn acacia
Agave palmeri	Palmer's agave
Ambrosia sp.	ragweed
Atriplex canescens	four-wing saltbush
Baccharis sarothroides	desert broom
Bouteloua curtipendula	side oats grama
B. gracilis	blue grama
Calliandra humilis	fairy duster
Cassia sp.	senna
Celtis reticulata	netleaf hackberry
R Cirsium sp.	thistle
Cucurbuta sp.	calabazilla
Chrysothamnus sp.	rabbitbrush
Dasylirion wheeleri	sotol
R Datura discolor	desert thornapple
R Ephedra sp.	Mormon tea
Eragrostis lehmanniana	Lehmann's lovegrass
Eriogonum sp.	buckwheat

	Flourensia cernua	tarbush
	Fouquieria splendens	ocotillo
	Gutierrezia sp,	snakeweed
	Helianthus annus	common sunflower
	Hilaria belangeri	curly mesquite grass
	Larrea tridentata	creosote bush
	Lepidium sp.	peppergrass
	Leptochloa sp.	sprangletop
	Lycium sp.	desert-thorn
	Muhlenbergia rigens	deergrass
R	Opuntia sp.	prickly pear
R	Opuntia spinosior	cane cholla
R	Opuntia violacea	purple prickly pear
	Perezia nana	Arizona desert-holly
	Populus fremontii	Fremont cottonwood
	Prosopis velutina	velvet mesquite
	Parthenium incanum	mariola
	Quercus emoryi	Emory oak
	Quercus sp.	Scrub oak
	Rhus microphylla	little-leaf sumac
	Salix goodingii	Goodding willow
	Salsola iberica	Russian thistle
	Sapindus saponaria	soapberry
	Senecio sp.	groundsel
	Sorghum halepense	Johnson grass
	Solanum eleagnifolium	silverleaf horsenettle (nightshade)
R	Sporobolis airoides	alkali sacaton
	Sporobolis wrightii	sacaton
R	Tamarix	salt cedar
	Yucca baccata	banana yucca
	Yucca elata	soaptree yucca
	Xanthium strumarium	cocklebur
	Zinnia sp.	desert zinnia

6.5.2 Fish and Wildlife. Numerous wildlife species occur in the project vicinity, associated with the habitat provided by the various herbaceous and woody plant species.

The road crosses the southern end of the San Pedro Riparian Conservation Area, with nearly 400 resident and migratory bird species. Most of these birds are expected in the project area. Some of these are confined to the riparian corridor, but many also occur in the upland habitats. Some of the more common birds include mourning dove, Gambel's quail, loggerhead shrike, and white-crowned sparrow. Many species of raptors (predatory birds) occur in the project area. The red-tailed hawk and northern harrier are common throughout the project area. The riparian area provides nesting for 40% of the gray hawks in the United States.

R Mammals characteristic of the project area include coyote, javelina, mule deer, Coue's whitetail deer, jackrabbit, cottontail, and wood rats. Mountain lions and bears are found in the nearby mountains and occasionally visit the project area. A more extensive list of mammals, (including scientific names), known or expected in the project area is found in Table 2.

R Reptiles and amphibians expected on site include: Couch's spadefoot toad (Scaphiopus couchii), western diamondback rattlesnake (Crotalus atrox), and gopher snake (Pituophis melanoleucus). Additional species are listed in Table 2.

R Fish are found in the project area only in the San Pedro River. The longfin dace (Agosia chrysogaster) and desert sucker (Pantosteus clarki) are the only remaining native fish in the river. Several mosquitofish (Gambusia affinis), an introduced species, were observed in the river on December 1, 1992. Several other introduced fish species also occur.

R 6.5.3 Endangered and Threatened Species. The Corps requested endangered species information in a letter to the U.S Fish and Wildlife Service (FWS) dated December 4, 1992. FWS responded in a letter dated January 6, 1993 that one federally listed endangered species, the lesser (Sanborn's) long-nosed bat (Leptonycteris curasoae yerbabuenae), is expected in the project area. Copies of these letters are included in Appendix C. The lesser long-nosed bat is a member of the leaf nose bat family, Phyllostomidae, and the subfamily of nectar-feeding New World bats, Glossophaginae. The population in the southwest U.S. and northern Mexico are migrants in the northern part of their range and are present from late May through early September, roosting in caves, mines, and abandoned tunnels. In the fall (October and November) the bats migrate south to feed on later blooming agaves and in winter feed on flowering trees of central and southern Mexico. The bats migrate north to southern Arizona and southwestern New Mexico in early spring. While in the northern portion of their range, the bats feed on the nectar and pollen of flowers of paniculate agave, especially Agave deserti, A. parryi, and A. palmeri, and early blooming columnar

Table 2. Amphibians, Reptiles, and Mammals Known or Expected in the Naco Project Area

Amphibians and Reptiles:

Bufo debilis insidior, Western green toad
Cnemidophorus uniparens, Desert grassland whiptail
Ficimia cana, Western hooknose snake
Heterodon nasicus bennerlyi, Mexican hognose snake
Holbrookia texana scitula, Southwestern earless lizard
Terrapene ornata luteola, Desert box turtle

Mammals:
Ammospermophilus harrisii, Harris' antelope squirrel
Antrozous pallidus, Pallid bat (Winter Range)
Bassariscus astutus, Ringtail
Canis latrans mearnsi, Coyote
Choeronycteris mexicanis, Long-tongued bat (Summer only)
Conepatus mesoleucus venaticus, Hog-nosed skunk
Cynomys gunnisoni zuniensis, Gunnison's prairie dog
Dipodomys ordii, Ord's kangaroo rat
Dipodomys merriami olivaceus, Merriam's kangaroo rat
Dipodomys spectabilis, Banner-tailed kangaroo rat
Eptesicus fuscus, Big brown bat (Winter Range)
Eutamias dorsalis, Cliff chipmunk
Felis concolor azteca, Mountain lion
Felis rufus baileyi, Bobcat
Lasionycteris noctivigans, Silver-haired bat
Lasiurus borealis, Hairy-tailed bat (Summer Only)
Lasiurus cinereus, Hoary bat (Winter Range)
Lasiurus ega xanthinus, Southern yellow bat
Leptonycteris sanborni, Sanborn's long-nosed bat
Lepus alleni, Antelope jack rabbit
Lepus californicus eremicus, Black-tailed jack rabbit
Macrotus californicus, California leaf-nosed bat
Mephitis macroura milieri, Hooded skunk
Mephitis estor, Striped skunk
Mustela frenata neomexicana, Long-tailed weasel
Myctis auriculus apache, Southwestern myotis
Myotis thysanodes, Fringed myotis (Winter Range)
Myotis velifer, Cave Myotis(Winter Range)
Myotis yumanensis, Yuma myotis

List provided by U.S. Fish and Wildlife Service, Arizona Ecological Services.

Myotis volans interior, Long-legged myotis
Myotis californicus, California myotis
Myotis leibii melanorhinus, Small-footed myotis
Nasua, Coati
Neotoma albigula, White-throated wood rat
Neotoma mexicana, Mexican wood rat
Odocoileus hemionus crooki, Mule deer
Odocoileus virginianus couesi, White-tailed deer
Onychomys leucogaster ruidosae, Northern grasshopper mouse
Onychomys torridus, Southern grasshopper mouse
Perognathus flavus, Silky pocket mouse
Perognathus hispidus conditi, Hispid pocket mouse
Perognathus intermedius, Rock pocket mouse
Perognathus penicillatus, Desert pocket mouse
Peromyscus boylii rowleyi, Brush mouse
Peromyscus eremicus, Cactus mouse
Peromyscus leucopus arizonae, White-footed mouse
Peromyscus maniculatus sonoriensis, Deer mouse
Pipistrellus hesperus, Western pipistrelle (Winter Range)
Plecotus townsendii, Townsend's big-eared bat
Procyon lotor pallidus, Raccoon
Reithrodontomys fulvescens, Fulvous harvest mouse
Reithrodontomys megalotis, Western harvest mouse
Reithrodontomys montanus, Plains harvest mouse
Sciurus nayaritensis chiricahuae, Mexican fox squirrel
Sigmodon arizonae cienegae, Arizona cotton rat
Sigmodon fulviventer minimus, Fulvous cotton rat
Sigmodon ochrognathus, Yellow-nosed cotton rat
Spermophilus spilosoma canescens, Spotted ground squirrel
Spermophilus tereticaudus neglectus, Round-tailed ground squirrel
Spermophilus variegatus grammurus, Rock squirrel
Spilogale gracilis leucoparia, Western spotted skunk
Sylvilagus audubonii minor, Desert cottontail
Sylvilagus floridanus holzneri, Eastern cottontail
Tadarida brasiliensis mexicana, American free-tailed bat (Winter Range)
Tadarida femorosacca, Pocketed free-tailed bat
Taxidea taxus berlandieri, Badger
Tayassu tajacu sonoriensis, Javelina
Thomomys bottae carri, Botta's pocket gopher
Thomomys bottae mearnsi, Botta's pocket gopher
Thomomys umbrinus intermedius, Southern pocket gopher
Urocyon cinereoargenteus scottii, Gray fox
Vulpes macrotis neomexicana, Kit fox

This list represents species which may occur in the area based on habitat preference, actual observations, and distribution maps as provided in Brown (1973 and 1982) and Hoffmeister (1986).

cacti such as the giant saguaro Carnegia gigantea and organ pipe Cereus thurberi. In the proposed project vicinity, Agave palmeri is the potential food source for the endangered bat; however, very few of these agaves are found immediately adjacent to the Naco road.

Lesser long-nosed bats feed in flocks which allow them to more efficiently exploit colonies of patchily dispersed agave (Howell 1976). Bats work a plant (a given A. palmeri plant has 12-20 elliptical panicles with 60 flowers each) until the food intake in that plant (or clump of plants) falls below the average of the habitat. That is, bats feed on a plant until they have a greater probability of encountering flowers so low in nectar that it would be energetically inefficient to further work the plant. Howell and Hartl (1980) showed that these nectar feeding bats will move to another plant (or clump of plants) if the new plant has nectar, if the distance to that plant is predictable, and if the cost of flying to that plant is less than the cost of further working the current plant; in other words, bats forage optimally.

There is little published literature suggesting what constitutes good or poor lesser long-nosed bat foraging habitat. Derdeyn (1989) recommended that areas with densities of less than 110 flower stalks/sq. km. not be considered feeding habitat for lesser long-nosed bats. However, FWS has not adopted any guidelines as to what does or does not constitute foraging habitat.

R 6.5.4 Candidate species; Special status species. The FWS species information letter also included Candidate species, or those species under review for future listing as endangered or threatened. Candidate species are identified for planning considerations, but they are not protected under the Endangered Species Act, Section 7 (a). Category 1 (C-1) Candidates are those for which FWS has substantial information to support a proposal to list the species as Endangered or Threatened. Category 2 (C-2) Candidates are those for which additional information is needed to support a listing proposal. C-1 species that potentially occur on site are the southwestern willow flycatcher (Empidonax trailii extimus), cactus ferruginous owl (Glaucidium brasilianum cactorum), and Acuna cactus (Echinomastus erectocentrus var. acunensis). The following C-2 species potentially occur in the project area: Mammals - California leaf-nosed bat (Macrotus californicus), Mexican long-tongued bat (Choeronycteris mexicana) (summer range), southwestern cave bat (Myotis velifer brevis) (winter range), and Arizona shrew (Sorex arizonae); Reptiles - canyon spotted whiptail lizard (Cnemidophorus burti), Texas horned lizard (Phrynosoma cornutum), Mexican garter snake (Thamnophis eques); Amphibians - lowland leopard frog (Rana yavapaiensis), Chiricahua leopard frog (Rana chiricahuensis); Plants - (Cynanchum wigginsii).

R The Corps requested special status species information in a letter to the Arizona Game and Fish Department (AGF), dated December 7, 1992. AGF responded in a letter dated December 22, 1992 (See Appendix C) that this project includes the following special status species: Baird's sparrow (Ammodramus bairdii), a state listed threatened bird; massasauga (Sistrurus catenatus), a state listed endangered snake, and southwestern cave myotis (bat).

No candidate or other special status species were found during the field investigations, but the habitat appears suitable for most of these species. Several of these species, including the willow flycatcher, Mexican garter snake, Chiricahua leopard frog, and lowland leopard frog, are found only in areas with permanent water or riparian habitat. In the project area, appropriate habitat for these species occurs only in the immediate vicinity of the San Pedro River. The cactus ferruginous pygmy owl, if present, would also most likely be found in the riparian habitat. Any of the bats potentially feed in the area. The California leaf-nosed bat and southwestern cave myotis potentially forage for insects throughout the project area. The Mexican long-tongued bat has similar feeding habits to the lesser long-nosed bat. The Arizona shrew, canyon spotted whiptail, Texas horned lizard, and massasauga potentially occur throughout much of the project area. The Acuna cactus is not expected in the project area because its distribution is to the north and west, at considerably lower elevations (Benson, 1969). Cynanchum, a slender vine in the milkweed family, is known only from elevations of 3,000 feet or lower (Rutman, 1992), and probably does not occur in the project area, where elevations are 4,200 feet and higher.

6.6 Cultural Resources. The area of potential effects was surveyed by Geo-Marine in 1991 as part of the original JTF-6 road improvement project. A portion of the project was surveyed by the Bureau of Land Management on land under their control. As a result of these surveys, no archeological sites were found to be located within the current project area. Several archeological sites were found.

In addition to the survey by Geo-Marine, a field visit was made by the Corps staff in November and December, 1992. All road work will be carried out within the boundaries of the original project.

6.7 Land Use. General land usage in the area is primarily grazing and pasture. Many places where the border fence is breached there is evidence that considerable traffic of aliens and/or contraband takes place. The small town of Naco is the only inhabited area along the project area. Hunting, in season, is permitted on most of the land.

6.8 Aesthetics. This area is characterized by its rural, pastoral nature. The vistas are pleasing and mostly untouched by development. Good visibility most of the year allows views of the surrounding countryside and mountains.

6.9 Noise. There are very few noise producing sources in this area. Noise is not a significant problem for the few people that live in the area.

6.10 Socioeconomics. The current population of Cochise County is approximately 100,000 people. The major nearby towns are: Sierra Vista/Fort Huachuca, with a population of about 35,000 people; Bisbee, with a population of about 8,000 people; and Douglas, with a population of about 15,000 people. The Fort Huachuca area is the major employer in the county, with over 11,000 persons on its payroll. Most employment in the Naco area is in ranching and government service. Mining was an important employer in the Bisbee area until several years ago when the mines were closed.

6.11 Transportation. There are no major transportation systems operating in the Naco area. Most of the international surface travel, across the Mexico border, is conducted in Nogales (70 miles west) and in Douglas (23 miles east). Approximately 750 vehicles cross into the U.S. at the Customs station in Naco on an average day. This figure would include 5 or 6 trucks per day. There are plans to expand the one lane entry road to two lanes in the next year in anticipation of increasing border traffic.

The major highways in this area are U.S. Route 80, and Arizona Routes 90 and 92. These routes do not past through the project area, but Arizona Route 92 parallels the border about 5 miles north of the project area.

7.0 ENVIRONMENTAL IMPACTS

Impacts related to the proposed road improvement are summarized in the following paragraphs. No Action and New Road Alternatives are not viable, therefore, impacts related to these alternatives are not addressed in this Final EA. However, potential impacts for the biological resources associated with No Action and New Road Alternatives are addressed in paragraph 7.5.

R 7.1 Physical Setting. Any project related impacts on the physical environment are anticipated to be minor. Vegetation along the existing road will not be significantly affected due to its being flagged and/or transplanted to a nearby location. The road repairs will be restricted to the road imprint.

7.2 Climate. This project will have little to no impact on the climate of the area. Some relatively small amount of dust will be released to the atmosphere during the movement of dirt, sand

and rock. These particulates will have some impact on visibility in the area for a very short time.

R 7.3 Water Quality. There will be little to no impact to surface or ground water. Procedures will be followed to minimize erosion during construction, such as: a) be aware of the local weather forecast, b) be aware of local weather developments, c) use the minimum amount of men and material needed in and around a Wash, d) Move dirt and materials so that the site is always prepared for protecting against erosion. Construction activities will cease until the surface conditions are suitable for men and machines (see Section 8.2 for Water Quality Certification).

7.4 Air Quality. Air quality should remain good while this construction progresses. Some dust will be released during construction activities. The small impact this may have will be short term and minor. However, the use of a watering system during all phases of the construction should reduce dust and other particulates. The entire 22-mile road improvement program is not expected to last more than 30 days with the equipment staging areas remaining in one location about two weeks. Overall, air quality in Naco and surrounding areas should not be adversely affected by the proposed project.

7.5 Biological Resources.

7.5.1 Vegetation.

No Action: This alternative will have no impact on vegetation in the area, except for the minor impacts associated with present enforcement activities.

New Road Alternative: A new road would eliminate approximately 53 acres of desert grassland and Chihuahuan desert scrub associated with the new alignment, assuming a road 22 miles long and 20 feet wide. Access requirements could increase the disturbed area to 100 acres or more. Depending on the alignment selected, the quality of the vegetation could range from moderately disturbed to relatively undisturbed. This alternative would probably require the removal of many plants protected by the Arizona Native Plant Law, especially agave, yuccas, sotol, ocotillo, and mesquite. A new alignment would probably also require a new crossing of the San Pedro river, involving the loss of riparian vegetation. Loss of grasslands where introduced species such as Lehmann's lovegrass is dominant would not be significant. Loss of the Chihuahuan desert scrub could be significant. Although this vegetation type is relatively extensive in Mexico, in the United States it is limited to a small area near the border in Southeastern Arizona and Southwestern New Mexico.

Proposed Action: The majority of the road improvement will remain on the existing road alignment, minimizing disturbance to vegetation. Some vegetation will be removed where culverts will be installed or repaired, where minor widening or straightening is required, at staging or equipment storage areas, and at borrow sites. Construction of the proposed project features will result in the loss of minor amounts of semidesert grassland and desert scrub habitat. Road maintenance work, involving regrading and scraping, will not directly require the removal of vegetation, but the indirect effects of dust and sidecasting of surface material may temporarily damage vegetation. Direct losses of vegetation will occur at the sites of proposed culverts, staging areas, and borrow areas. The following adverse impacts are anticipated:

a. Culvert about 1 mile east of western project boundary. Small areas (possibly 20' diameter on each side of the road) will be cleared of vegetation. Impacts will not be significant because vegetation consists mostly of introduced Lehmann's lovegrass, an annual senecio, and other common species.

b. Possible slight realignment at a dip in the road, approximately 1.2 miles east of western project boundary. One mesquite and one desert broom shrub may be removed at this site. Desert broom is a common shrub, and its loss is not significant. Mesquite, although relatively common, is provided some protection under the Arizona Native Plant Law. The Arizona Department of Agriculture recommends that the mesquite be salvaged for firewood if it must be removed.

c. Staging area, approximately 3.7 miles east of the western project boundary. Approximately .25 acre will be disturbed at this site, due to the storage of heavy equipment. The site was previously disturbed. Most of the vegetation to be disturbed on site consists of the introduced Lehmann's lovegrass. Loss of this common species is not a significant impact. Scattered clumps of native grasses such as blue grama grass and side oats, which are less resistant may also be disturbed. Soaptree yucca plants may be crushed; however, this species of yucca is very resistant, and will resprout when the disturbance is removed. Other plants potentially affected include fairy duster and white thorn acacia. Both of these are expected to recover from the disturbance.

R d. Road improvement, washes approximately 5.2 and 5.5 miles east of western project boundary (in San Pedro Riparian Conservation Area). Impacts to vegetation will be minor at these sites. Little vegetation will be removed, and the small amount that will be removed consists mainly of weedy species such as Russian thistle, Johnson grass, and silverleaf horsenettle. One four-wing saltbush may be removed at the more easterly of the two washes.

e. Staging area, just east of monument 96. Impacts at this site will be minor due to previous disturbance. Damaged mesquite on the site indicates that this site may have been of higher quality in the recent past.

f. Road improvement, sandy wash just east of monument 94. Little impact to vegetation is expected at this site. Minor losses of rabbitbrush, lovegrass, and cocklebur may occur.

g. Staging area approximately 2.4 miles east of Naco. Storage of equipment on this site will disturb approximately .25 acre of grassland, consisting primarily of the introduced Lehmann's lovegrass. This species is not a sensitive resource. A few small creosote bush plants may also be damaged; however, recovery is expected.

h. Borrow area, limestone hills. The limestone hills are considered to be a sensitive botanical area. If borrow is limited to disturbed areas, no significant impacts will occur.

i. Road improvement, wash, approximately 5.1 miles east of Naco. This improvement will involve little or no disturbance to vegetation.

7.5.2 Fish and Wildlife.
No Action: This alternative will have no impact on wildlife in the area, except for the minor impacts associated with present enforcement activities.

New Road Alternative: A new road would eliminate wildlife associated with the new alignment. The significance of this loss would depend on the alignment selected. Most birds would find other habitat in the vicinity, but competition for other available habitat may increase. Small mammals and reptiles would be displaced, and losses could be potentially significant. Direct losses of larger mammals would probably be low, but competition for remaining resources in adjacent areas would increase.

Proposed Action: The proposed action will have little or no
R impact on fish because construction will not take place in a flowing river or standing water. Crossing the San Pedro River to access construction sites would increase turbidity and may alter the substrate of the river, adversely affecting the fish in the river. To avoid such impacts, the construction crews will not cross the river. If vehicles are needed west of the river, access will be from the western end of the road, via Arizona Highway 92 bridge.

With the loss of vegetation will be the associated loss of wildlife habitat and the displacement of some wildlife. The proposed road improvements will result in an insignificant

reduction in animals whose home range is in or just adjacent to the road improvements, but no change in the overall species diversity of the area is expected. Habitat removal and disturbance will eliminate or displace common wildlife species such as quail, doves, rabbits, and wood rats. Impacts to these common species are not significant. Loss of shrubs for deer browsing will be insignificant relative to the available habitat of similar or higher quality in the region. The loss of habitat, including mesquites, could displace or eliminate other wildlife, including raptors and other birds. Due to the minor extent of such habitat loss, impacts to wildlife will not be significant. No significant habitat fragmentation or isolation of wildlife populations is expected from the repair, improvement, and maintenance of the road.

7.5.3 Threatened and Endangered Species Impacts. The proposed action is not expected to impact federally listed endangered or threatened species.

No Action: This alternative will not impact threatened and endangered species.

New Road Alternative: The new road alternative could potentially eliminate agave plants that provide a food source for the endangered lesser long-nosed bat. If so, coordination, and possible formal consultation under Section 7 of the Endangered Species Act would be required.

Proposed Action: A primary concern of this project is the potential impact on the endangered lesser long-nosed bat as a result of the clearing of agave plants which are used by the bats as a primary food source while on the northern part of their range. Although the endangered bat probably does not roost within the proposed project area, it may potentially feed upon the agaves on-site between May and October.

R Few, if any agave plants occur in areas of proposed construction. A biologist will be present during the initial survey of the road and during critical periods of construction to ensure that agave plants are preserved. If any non-flowering agave plants are unavoidable, they will be relocated elsewhere in the nearby area. With this mitigation, the proposed road improvement and maintenance will have no effect on the lesser long-nosed bat.

7.5.4 Candidate Species; Special status species. Several of the federal candidate and state special status species have a moderate to high potential for occurring on site, but none were observed during the Corps November 4-6 or December 1, 1992 field investigations. No significant impacts to candidate or special status species are anticipated. The project is expected to have no impact to the willow flycatcher or the cactus ferruginous

pygmy owl because the project will not affect the riparian habitat where these species are likely to occur. Minor impacts to the Mexican garter snake, Chiricahua leopard frog, and/or lowland leopard frog may occur if vehicles must cross the San Pedro River. Impacts would primarily be associated with turbidity, and would be short term. A vehicle is unlikely to crush an animal in crossing the river, because the water level and topography prevent crossing at high speeds. Since other vehicles routinely cross the river on this road, no eggs of either frog species are likely to be present. The proposed action could potentially affect foraging habitat of any of the three candidate bat species which may feed in the project area. The impact, if any, would be minor because loss of breeding and roosting habitat, not lack of foraging habitat, is believed to be the primary reason for the population decline of the California leaf-nosed bat and the southwestern cave bat. Measures to avoid impact to the endangered lesser long-nosed bat will also protect the Mexican long-tongued bat.

7.6 Cultural Resources. The area of potential effects (APE) for the proposed action contains several archeological sites. These sites will be avoided during construction. This will be accomplished by flagging prior to construction and the presence of archeological monitors during construction. Scraping and road widening activities will not take place within flagged areas. A buffer zone will be created by the placement of flagging at least 30 meters beyond the site boundaries. Flagging will be removed once construction is completed.

If additional cultural resources are discovered during construction and cannot be avoided, work will be suspended in that area until the properties are evaluated for eligibility for listing in the National Register of Historic Places (NRHP) in consultation with the Arizona State Historic Preservation Officer (SHPO). If the properties are determined to be eligible for the NRHP, the effects of the proposed construction will be taken into consideration in consultation with the SHPO; and the Advisory Council on Historic Preservation will be provided an opportunity to comment in accordance with 36 CFR 800.11. The SHPO concurred that the project would have no effect on National Register properties on January 13, 1993 (Appendix C).

7.7 Land Use. The proposed project will not have impacts to grazing and pasture land along the road improvement alignment.

7.8 Aesthetics. The very small amount of new construction work on the roadway and the small amount of dust released will have very little impact on aesthetics. The "look" of the roadway will not noticeably change and the dust will only have a short term effect on visibility in the area.

7.9 Noise. Noise from the equipment will increase the noise level in the immediate area of the work. Few people reside in the area to be impacted. The noise will move with the progress of work and therefore will not be much of a concern to anyone
R that may be nearby. The impact will be short term and insignificant.

7.10 Socioeconomic. The daily needs of approximately 130 construction people could have an economic impact on an area the size of Naco. However, the Base Camp will probably remain in the Douglas area. Food, water, etc. will probably be purchased from sources in Fort Huachucá or Douglas, where its impact will be negligible.

R 7.11 Transportation. The construction equipment is scheduled to arrive in Davis-Monthan Air Force Base via train, where it will be transferred to trucks for movement to the construction areas. Arizona Highways 80, 82, 90 and 92 are the most likely routes to be used. Any permits required for oversized or overweight equipment, JTF-6 will obtain from the Arizona Department of Transportation (ADOT).

Movement of personnel and equipment will be held to a minimum on the major transportation (roads) arteries in the area. If any trucks haul overweight or oversize loads coordination with ADOT will minimize any short term impacts. The proposed project will hopefully reduce the illegal traffic crossing the border, both during and after construction.

8.0 COORDINATION.

R The proposed action outlined in this document has been brought to the attention of and/or discussed with the following agencies: U.S. Border Patrol, U.S. Customs Service, International Boundary and Water Commission - U.S. Section (IBWC), U.S. Fish and Wildlife Service, U.S. Bureau of Land Management, Coronado National Memorial, Coronado National Forest, Buenos Aires National Wildlife Refuge, Corps of Emgineers (Regulatory Section, Phoenix), Arizona Department of Game and Fish, Arizona Department of Environmental Quality, Arizona Department of Agriculture, Arizona State Lands Commission, Arizona State Historic Preservation Officer, Army Corps of Engineers (Regulatory Branch, Arizona) and the Cochise County Planning Department.

8.1 Coordination for the Draft EA.

R The Draft EA was distributed to all persons and agencies listed in the Mailing List for a thirty (30) day public review period. Comments and Responses have been incorporated into this document in Appendix D.

On December 14, 1992, the proposed action was coordinated with Mr. Don Crawford of the International Boundary Water Commission staff regarding the proposed project. Mr. Crawford advised that the Draft Environmental Assessment should be forwarded to the IBWC office for comment. This was accomplished
R during January 1993. JTF-6 staff has submitted a letter of request for military personnel to work along the border, dated January 27,1993 (See Appendix C).

R U.S. Fish and Wildlife Service (FWS). The Corps of Engineers requested, in a letter dated December 4, 1992, that the FWS provide updated endangered species information in compliance with Section 7 of the endangered Species Act. FWS provided the information in a letter dated January 6, 1993. The request and reply letters are included in Appendix C. Comment letters and Responses are found in Appendix D. FWS biologist Mary Richardson met on site with construction and COE personnel on December 1, 1992. Informal coordination with Ms. Richardson and Mr. Don Metz on January 22, 1993 indicated that the proposed monitoring program is acceptable.

R Arizona Game and Fish Department (AGF). A request for a list of special status species was sent to AGF on December 7, 1992. The reply was received in a letter dated December 22, 1993, both letters are incorporated into this document in Appendix C. Informal coordination with AGF biologists is ongoing.

R Arizona Department of Agriculture (ADA). ADA District Inspector Catherine Werts participated in the December 1, 1992 field investigation. Ms. Wertz will demonstrate procedures for moving agaves.

Bureau of Land Management (BLM). BLM San Pedro Riparian National Conservation Area Manager, Greg Yuncevich, participated in the December 1, 1992 field investigation. Additional coordination is ongoing.

The Corps of Engineers, Los Angeles District has coordinated
R the proposed project with Mr. Robert Dummer, Corps of Engineers, Regulatory Branch, Phoenix. This project will impact less than one acre of land area along any waterway and therefore the project will qualify under Nationwide Permit #14, Road Crossing. The Section 404 (b)(1) Water Quality Evaluation is shown in Appendix A.

On December 4, 1992 COE staff coordinated the proposed action with the Arizona Department of Environmental Quality (Tucson, Arizona) staff. According to their requirements and for compliance with the state water quality standards WQMS 301.030 is enclosed in Appendix B. The Department reviewed the Draft EA and

submitted a letter of comment, dated January 19, 1993, that is incorporated into this document in Appendix D.

R 8.2 Coordination for the Final EA.

U.S. Fish and Wildlife Service. A phone conversation on 29 January 1993 with Mr. Don Metz and Ms. Mary Richardson clarified that the FWS would be notified of when the COE biologist would be in the project area, especially when in the San Pedro River area. It was also agreed that no construction vehicles, except for light duty vehicles, will be driven across the San Pedro River. Agreement was reached that all construction equipment would stay clear of the "100 year" flood plain area. The COE also agreed that no fill material would be placed on the north slope of the limestone hills borrow site. The FWS was informed that Lt. Word and Lt. Hopson would be the designated field contact persons for the project.

During a phone conversation on 29 January 1993 it was agreed that monitoring of biological resources will be periodically ongoing by COE staff. Species to be avoided will be marked/flagged prior to construction commencing by COE staff. Construction personnel were briefed on environmental protection considerations by COE staff on 21 January 1993. Any sensitive species that cannot be avoided will be transplanted to a nearby area. Mr. Jim McGinnis, Native Plant Law specialist, explained the requirements for removal of protected native plants in a phone conversation 28 January 1993. Coordination was held with Ms. Catherine Wertz to meet in the project area to instruct the construction personnel on the proper proceedures for transplanting agaves and other protected plants.

Phone conversations were held with the COE Regulatory Branch, Phoenix Office, during preparation of final EA. Mr. Robert Dummer indicated that the project would qualify under 33 CFR, Part 330 for a Nationwide Permit # 14, Road Crossing. This permit is granted because the impacted area at each wash crossing is less than one acre.

On January 19th and 20th, 1993 phone conversations were held with Mr. Jim Matt and Ms. Melinda Longsworth of the Arizona Department of Environmental Quality to discuss their concerns about the project. They were informed that the project qualifies for a Nationwide Permit # 14. Mr. Matt stated that therefore the project would then be precertified for the state's 401 Water Quality Certification. It was also stated that borrow materials needed for the project would either be available on site or from approved sources through the Fort Huachuca government contracting sources. On January 29 Ms. Longsworth stated that since no pollution, from washing borrow materials, would be discharged into the waters of the U.S., the 402 (NPDES) permit would not be required.

A COE biologist presented an environmental briefing to the construction battalion people on 21 January 1993.

9.0 COMPLIANCE WITH ENVIRONMENTAL REQUIREMENTS

9.1 National Environmental Policy Act (NEPA), as amended. This Environmental Assessment has been prepared in accordance with the requirements of the Act and with the Council of Environmental Quality Regulations for implementing NEPA.

R 9.2 Clean Water Act, as amended. Since no construction activity will occur near the San Pedro River no changes are anticipated to the quality of water in the river. In compliance with Section 404 of the act, a 404(b)(1) has been prepared (Appendix A). The proposed road improvement passes through few washes. Appropriate water quality form WQMS - 301.030 has been prepared in compliance with the Arizona Department of Environmental Quality (Appendix B). The proposed road improvement meets with the Nationwide permit criteria (coordination with COE, regulatory branch, Arizona). Provisions of the Clean Water Act are complied with.

9.3 Clean Air Act, as amended. The small number of construction equipment needed for this proposed work will not
R significantly impact the air quality in this area. The equipment will only be in an area for a short period of time and therefore will have a minimal impact. This proposal is in compliance with this Act.

9.4 National Historic Preservation Act, as amended. JTF-6 has coordinated with the SHPO pursuant to Section 106 of the act (36 CFR 800). A letter of concurrence from the SHPO that the proposed project will not effect National Register eligible properties, dated January 20, 1993, was received and is incorporated into this document in Appendix C. The project is in full compliance with this act.

R 9.5 Endangered Species Act. The Corps of Engineers requested, in a letter dated December 4, 1992, that the FWS provide updated endangered species information in compliance with Section 7 of the endangered Species Act. FWS provided the requested information in a letter dated January 6, 1993. The letter indicates that the Federally listed endangered lesser long-nosed bat potentially occurs in the project area. The proposed project will not affect this or any other endangered or threatened species known or potentially in the project area. Formal consultation pursuant to Section 7 of the Act is not required. Thirteen candidate species also potentially occur on site. These are discussed in sections 6.5.4 and 7.5.4 of this EA. Informal coordination is ongoing with FWS to avoid impacts to listed and candidate species. This project is in compliance with this act.

9.6 Fish and Wildlife Coordination Act, as amended. The FWS and Arizona Department of Game and Fish (AGF) have been contacted regarding this project. Coordination with these agencies is ongoing. No Coordination Act report is required because the proposed action is not a water resources development project. The project is in full conpliance with this act.

R 9.7 Executive Order 11990, Protection of Wetlands. No road maintenance will be undertaken in the "San Pedro Riparian National Conservation Area" wetlands. Wetlands located near the river are not part of this project. Placement of culverts or gravel may take place at two washes, which are located approximately one mile east of the San Pedro River. This area is under BLM jurisdiction. Construction would not occur without prior approval and written agreement with the BLM. This action is in compliance with this E.O.

R 9.8 Arizona Native Plant Law. The law requires that the Arizona Department of Agriculture be notified prior to the removal of any state-protected plant. The Department of Agriculture has been notified of the project. An official notice of intent to remove protected plant species in the project area is not required for this project. The Department does not recommend salvage of any protected plants for this project, provided that construction remains within the proposed alignment. State-protected plants potentially affected by this project are velvet mesquite and yuccas. This project is in compliance with this law.

10.0 ENVIRONMENTAL COMMITMENTS

10.1 Prior to construction JTF-6 will inform IBWC of approximate construction start date, type of equipment and number of personnel involved.

10.2 The proposed project will not impact monuments located along the U.S. and Mexico border; JTF-6 personnel will avoid road construction within 10 feet of the International Boundary. The staging area will not be selected in the areas near the International Boundary; during or after maintenance of roads, waste or construction material will not be piled near the
R International Boundary. Non-native and/or construction waste materials will be disposed of in local approved land fills.

10.3 All archeological sites will be avoided by road improvement activities. All work will take place within the boundaries of the original road improvement project. In addition, construction will be monitored by an archeologist to ensure that construction crews will stay within the established project area, and away from the previously identified archeological sites.

10.4 The proposed project's work will not disturb existing drainage patterns and flow rates.

10.5 Appropriate control techniques will be utilized during construction along the washes to minimize turbidity.

10.6 A watering program will be employed during the construction to minimize fugitive dust; the water will be obtained from a local water supply and will be free of contaminants.

10.7 Clean material will be used to construct structures; no polluted silts or other material will be placed in the washes;
R construction debris and rock will be removed upon completion of the project; and surfaces will be periodically cleaned after rain storm events.

10.8 During construction, any leftover rocks, debris, oil and grease will be properly disposed of.

10.9 Roads will be maintained and upgraded where they presently lie, and only to their existing width.

R 10.10 Prior to this construction, every attempt will be made to mark protected native plants. Those plants identified as salvageable by the Arizona Department of Agriculture (ADA) will be transplanted to a nearby suitable habitat.

R 10.11 A qualified biologist familiar with the Environmental Assessment, including environmental commitments and mitigation, shall be present at critical times during mobilization, construction, and demobilization to monitor the project.

10.12 Borrow from the limestone hills east of Naco shall be limited to the previously disturbed area. The shrub-covered portions of the hills are to remain undisturbed. No borrow
R material is to be placed in the wash adjacent to the limestone hills. Areas to be avoided will be marked. The COE biological monitor shall be consulted three days in advance of any excavation of borrow material from this site.

R 10.13 The FWS, Arizona Ecological Services will be notified prior to work being done in the San Pedro Riparian National Conservation Area.

R 10.14 No construction equipment will be driven through the San Pedro River. Access to the road construction sites west of the river will be via Arizona Highway 92, and the bridge over the river.

R 10.15 Procedures will be followed to minimize erosion during construction, such as: a) be aware of the local weather forecast, b) be aware of local weather developments,

c) use the minimum amount of personnel and material needed in and around a Wash, d) Move dirt and materials so that the site is always prepared for protecting against erosion. Construction activities will cease until the surface conditions are suitable for personnel and machines.

11.0 LIST OF PREPARERS AND REVIEWERS

David Compas, Geographer, Environmental Coordinator
Stephen Dibble, Senior Archaeologist, Cultural Resources
Lois Goodman, Ecologist, Biological Resources

Joy Jaiswal, Environmental Protection Specialist, Reviewer
Laura Tschudi, Chief, Environmental Design Section Reviewer
LTC. DeHarde, Staff Engineer-J3, Joint Task Force - Six Reviewer
Mr. John Munch, U.S. Border Patrol, Naco, Reviewer

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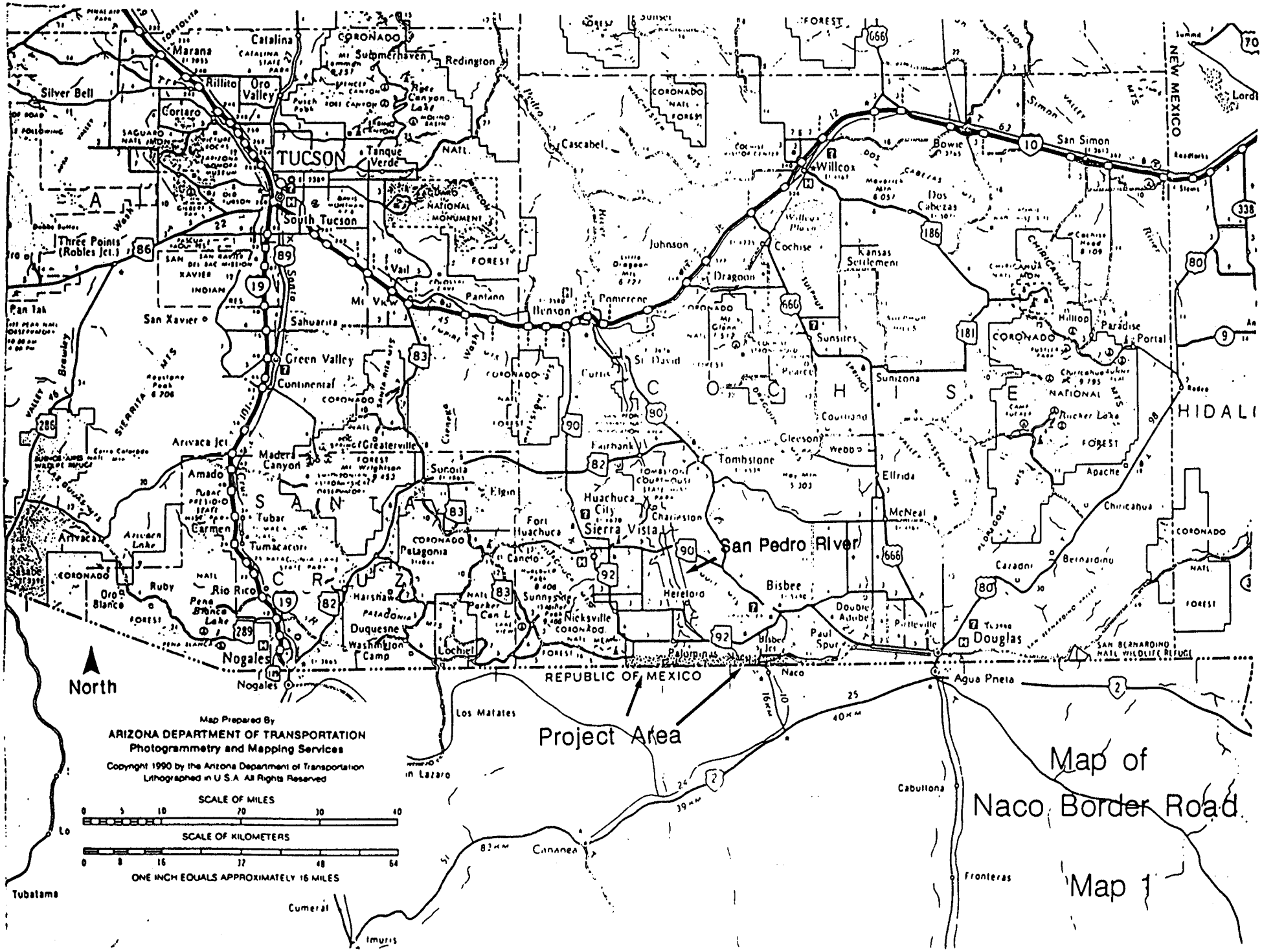
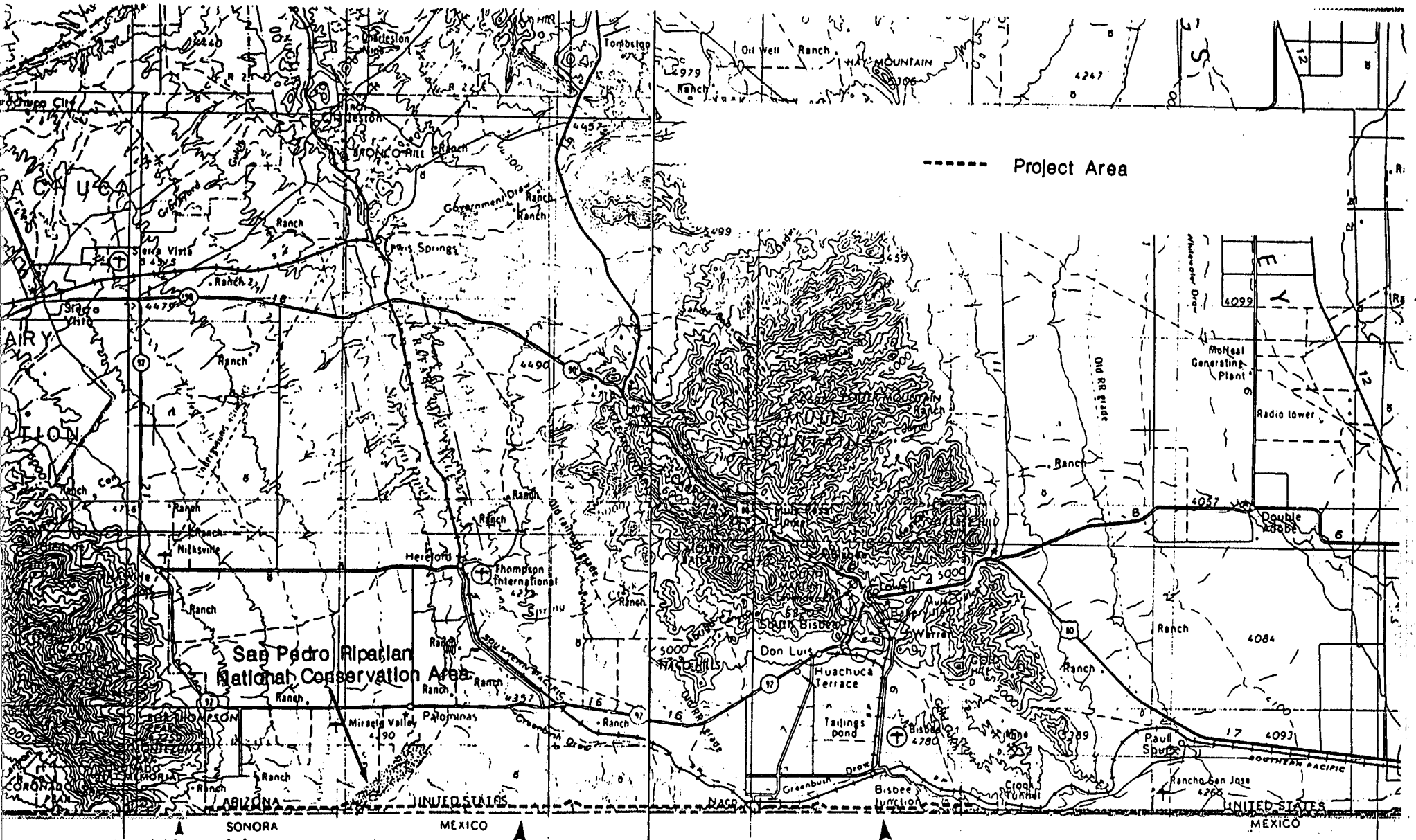
Maps

of

Naco Border Road


North
Project Area
REPUBLIC OF MEXICO
San Pedro River
Map Prepared By
ARIZONA DEPARTMENT OF TRANSPORTATION
Photogrammetry and Mapping Services
Copyright 1990 by the Arizona Department of Transportation
Lithographed in U.S.A. All Rights Reserved
SCALE OF MILES
0 5 10 20 30 40
SCALE OF KILOMETERS
0 8 16 32 48 64
ONE INCH EQUALS APPROXIMATELY 16 MILES
Map of
Naco Border Road
Map 1


Project Area
San Pedro Riparian National Conservation Area
West Road Segment
East Road Segment
Map of
Naco Border Road
North
Map 2
Scale 1:250,000
20 Statute Miles
30 Kilometers
15 Nautical Miles
CONTOUR INTERVAL 200 FEET
WITH SUPPLEMENTARY CONTOURS AT 100 FOOT INTERVALS
TRANSVERSE MERCATOR PROJECTION
SONORA
MEXICO
UNITED STATES
MEXICO
Coronado National Memorial
Tombstone
Sierra Vista
Hereford
Thompson International
Palominas
Naco
Bisbee
Don Luis
Huachuca Terrace
Tailings pond
Paul Shute
Rancho San Jose
Double Adobe
McNeal Generating Plant
Radio tower
Old RR grade
Miracle Valley
Nicksville
Greenbush Draw
Bisbee Junction
Gloor Tunnel
SOUTHERN PACIFIC

APPENDIX A

SECTION 404(b)(1) WATER QUALITY EVALUATION (CLEAN WATER ACT)

Prepared By:

United States Army Corps of Engineers

Los Angeles District

Los Angeles, California

1992

THE EVALUATION OF THE EFFECTS
OF THE DISCHARGE OF DREDGED OR FILL MATERIAL
INTO THE WATERS OF THE UNITED STATES
(Section 404 Evaluation)
JTF-6
NACO, COCHISE COUNTY, ARIZONA

I. INTRODUCTION. The following evaluation is provided in accordance with Section 404 (b)(1) of the Federal Water Pollution Control Act Amendments of 1972 (Public Law 92-500) as amended by the Clean Water Act of 1977 (Public Law 95-217). Its intent is to succinctly state and evaluate information regarding the effects of discharge of dredged or fill material into the waters of the United States. As such, it is not meant to stand alone and relies heavily upon information provided in the environmental document to which it is attached. Citation in brackets [ ] refer to expanded discussion found in the Environmental Assessment (EA), to which the reader should refer for details.

II. PROJECT DESCRIPTION.

A. Location [4.1]: The project is located east and west of Naco, Cochise County, Arizona, along the U.S. and Mexico border (Figure 1). The road segments are located on the U.S. side of the border.

B. General Description [1.0]: This Environmental Assessment (EA) addresses the maintenance and repair of 22 miles of an existing road east and west of Naco, Arizona. The road maintenance will consist of light grading, installation of culverts, grading and shaping for drainage and placing gravel in several smaller washes. The project will provide maintenance which the Border Patrol does not have the equipment or personnel to perform. The intent is to repair the erosion damage on the existing roadway and washes that cross the road. The construction will be accomplished by military personnel and will be part of their training. Project construction will take about 30 days and is scheduled to occur between February and the end of March 1993. However, due to funding limitations and\or availability of construction personnel the work may be delayed. If that should occur the work then would be accomplished prior to April 1994. JTF-6 will avoid construction in the event of heavy rain or floods to reduce any impacts to water quality.

C. Authority and Purpose: The Secretary of Defense established Joint Task Force Six (JTF-6) on 13 November 1989. The purpose of Joint Task Force Six (JTF-6) Naco is to provide the U.S. Border Patrol, and other concerned agencies, with improved access to the border areas to spot and interdict drug trafficking and illegal immigration.

D. Description of the Proposed Discharge Sites [4.1]: The proposed discharge sites are located east and west of Naco,

Arizona. Three wash crossings on the east road segment and four crossings on the west road segment are planned for erosion control (culverts or rock emplacement). Sand bags will be used to protect banks were needed. Little, if any, discharge of materials or debris will take place.

E. Description of Disposal Method: Any materials needing disposal will be utilized in the grading of the nearby roadway during construction.

III. FACTUAL DETERMINATIONS.

A. Disposal Site Physical Substrate Determinations:

1. Substrate Elevation and Slope: The project is located in the highlands of south-central Arizona. The project is situated in a high valley setting at an elevation of about 4,000 feet above mean sea level. The region is characterized by numerous low, rugged mountain ranges separated by valleys.

2. Sediment type: During construction of culverts sand and/or dirt particles may occur from wash walls, therefore, sediment will be compatible with the material found in the walls of the wash.

3. Dredged/Fill Material Movement: All materials to be utilized on this road (stones,sand or gravel) will be obtained from the quarry site south of the town of Bisbee Junction, if needed. In the event of heavy rains, construction would be postponed until the project areas were suitable for machines and materials. Any silt or debris that might fall into any of the washes will be removed and used for nearby road repairs.

4. Physical Effects on Benthos: Not applicable to the proposed project.

5. Other effects:

Impact: __X___N/A _____Insignif. _____Signif.

6. Action Taken to Minimize Impacts:

Needed: __X__ Yes ____ No

III. Effect on Water Circulation, Fluctuation, and Salinity Determinations:

A. Effect on Water [6.3]. The following potential impacts were considered:

a. Salinity _____N/A__X__INSIGNIF.____SIGNIF.
b. Water Chemistry

	(pH, etc.)	N/A	X	INSIGNIF.	SIGNIF.
c.	Clarity	N/A	X	INSIGNIF.	SIGNIF.
d.	Color	N/A	X	INSIGNIF.	SIGNIF.
e.	Odor	N/A	X	INSIGNIF.	SIGNIF.
f.	Taste	N/A	X	INSIGNIF.	SIGNIF.
g.	Dissolved gas levels	N/A	X	INSIGNIF.	SIGNIF.
h.	Nutrients	N/A	X	INSIGNIF.	SIGNIF.
i.	Eutrophication	N/A	X	INSIGNIF.	SIGNIF.
j.	Others	N/A	X	INSIGNIF.	SIGNIF.

B. Effect on Current Patterns and Circulation. The potential of discharge or fill on the following conditions were evaluated:

1.	Current Pattern & Flow	N/A	X	INSIGN.	SIGN.
2	Velocity	N/A	X	INSIGN.	SIGN.
3	Stratification	N/A	X	INSIGN.	SIGN.
4	Hydrology Regime	N/A	X	INSIGN.	SIGN.

C. Effect on Normal Water Level Fluctuations: The potential effect of discharge or fill on tide and river stages is not applicable to this project.

IV. Suspended Particulate/Turbidity Determinations at the Disposal Site. Project construction will occur during February and March, most of these washes will be dry (precipitation received during these months ranges from 2 to 3 inches). However, due to funding limitations and\or availability of construction personnel the work may be delayed. If that should occur the work then would be accomplished prior to April 1994. In the event of heavy rains/flooding construction would be postponed. Construction of culverts will reduce erosion, therefore, turbidity will be controlled.

A. Expected Change in Suspended Particulate and Turbidity levels in Vicinity of Disposal Site: These impacts are considered insignificant because they will be distributed over a relatively small area and will be short term in duration.

Impact: N/A X INSIGNIF. SIGNIF.

B. Effects (degree and duration) on Chemical and Physical Properties of the Water Column.

a.	Light Penetration	N/A	X	INSIGNIF.	SIGNIF.
b.	Dissolved Oxygen	N/A	X	INSIGNIF.	SIGNIF.
c.	Toxic Metals & Organic	N/A	X	INSIGNIF.	SIGNIF.
d.	Pathogen	N/A	X	INSIGNIF.	SIGNIF.
e.	Esthetics	N/A	X	INSIGNIF.	SIGNIF.

f. Others ____N/A__X__INSIGNIF.____SIGNIF.

1. Effects of Turbidity on Biota: These impacts are considered insignificant because washes within the project area are dry, involve a relatively small area and will be short term in duration.

a. Primary Productivity ____N/A__X__INSIGNIF.____SIGNIF.
b. Suspension/Filter Feeders ____N/A__X__INSIGNIF.____SIGNIF.
c. Sight feeders ____N/A__X__INSIGNIF.____SIGNIF.

2. Actions taken to minimize impacts: In case of a flood occurrence, the project construction will be postponed until washes dry out.

V. Contaminant Determination

No chemical or biological impacts are expected at the disposal site.

VI. Effect on Aquatic Ecosystem and Organism Determinations:

A. The Following ecosystem effects were evaluated [6.5]: The proposed maintenance and repair of the drag roads would have no significant effect on aquatic organisms, special aquatic sites, or threatened and endangered species.

1. On Plankton ____N/A__X__INSIGNIF.____SIGNIF.
2. On Benthos ____N/A__X__INSIGNIF.____SIGNIF.
3. On Nekton ____N/A__X__INSIGNIF.____SIGNIF.
4. Food Web ____N/A__X__INSIGNIF.____SIGNIF.

Sensitive Habitats:

1. Sanctuaries, refuges ____N/A__X__INSIGNIF.____SIGNIF.
2. Wetlands ____N/A__X__INSIGNIF.____SIGNIF.
3. Mudflats __X__N/A____INSIGNIF.____SIGNIF.
4. Eelgrass beds __X__N/A____INSIGNIF.____SIGNIF.

Riffle and Pool Complexes
__X__N/A____INSIGNIF.____SIGNIF.

Threatened & Endangered Species
__X__N/A____INSIGNIF.____SIGNIF.

Other Wildlife (grunion,trout)
____N/A__X__INSIGNIF.____SIGNIF.

Actions to Minimize Impacts: None required.

VII. Proposed Disposal Site Determinations: Is the mixing zone for the disposal site confined to the smallest practicable Zone?

Yes. JTF-6 has submitted WQMS-301.030 forms to the Arizona Water Quality Management Unit to document compliance with Arizona State Water Quality Standards.

VIII. Determination of Cumulative Effects of Disposal or Fill on the Aquatic Ecosystem: No such cumulative impacts are anticipated as a result of proposed project.

Impacts: ____N/A__X__INSIGNIF.____SIGNIF.

IX. Determination of Indirect Effects of Disposal or Fill on the Aquatic Ecosystem:

Impacts: ____N/A__X__INSIGNIF.____SIGNIF.

X. FINDING OF COMPLIANCE.

A review of the proposed project indicates that:

A. The discharge represents the least environmentally damaging practicable alternative and if in a special aquatic site, the activity associated with the discharge must have direct access or proximity to, or be located in the aquatic ecosystem to fulfill its basic purpose

___X__YES _____NO

B. The activity does not appear to: 1) violate applicable state water quality standards or effluent standards prohibited under Section 307 of the CWA; 2) jeopardize the existence of Federally listed endangered or threatened species or their habitat; and 3) violate requirements of any Federally designated marine sanctuary.

__X___ YES ____ NO

C. The activity will not cause or contribute to significant degradation of waters of the U.S. including adverse effects on human health, life stages of organisms dependent on the aquatic ecosystem, ecosystem diversity, productivity and stability, and recreational, aesthetic, and economic values;

___X__YES ____NO

D. Appropriate and practicable steps have been taken to minimize potential adverse impacts of the discharge on the aquatic ecosystem.

___X___YES ____NO

On the Basis of the Guidelines, the Proposed Disposal Site(s) for the Discharge of Dredged or Fill Material (specify

which) is (select one):

_____ (1) Specified as complying with the requirements of these guidelines; or,

___X___ (2) Specified as complying with the requirements of these guidelines, with the inclusion of appropriate and practical conditions to minimize pollution or adverse effects on the aquatic ecosystem; or,

_____ (3) Specified as failing to comply with the requirements of these guidelines.

APPENDIX B

WQMS-301.030
APPLICANTS RESPONSE TO ARIZONA WATER QUALITY CONTROL COUNCIL POLICY FOR CONSTRUCTION AND RELATED ACTIVITIES IN WATER, ADOPTED APRIL 13, 1977 REVISED JANUARY 3, 1990

Prepared By:

United States Army Corps of Engineers

Los Angeles District

Los Angeles, California

1992

1992WQMS - 301.030
APPLICANTS RESPONSE TO ARIZONA WATER QUALITY CONTROL COUNCIL POLICY FOR CONSTRUCTION AND RELATED ACTIVITIES IN WATER, ADOPTED APRIL 13 1977 REVISED JANUARY 3, 1990

For each policy, please describe the procedures, practices and/or facilities that will (a) minimize potential pollution of surface waters and (b) demonstrate compliance with the State water quality standards (A.A.C. Title 18, Chapter 11, Articles 1, 2, and 3). Please note the waters of the State include all watercourses, and perennial or intermittent streams (A.R.S. 49-201.31).

Policy (1) Provision for temporary pollution control measures including dikes, basins, ditches and application of straw and seed.

At present, and during most of the year, all washes are dry. The San Pedro River flow is almost perennial. Care will be taken to ensure that no construction silt, debris or other potentially polluting materials are deposited in the washes. In addition, the following prevention measures will be used: clean material will be used to construct structures; debris and rock that may have fallen into a wash will be removed upon completion of the project; refueling and emergency repair areas will be located well away from washes; and spills will be reported immediately, contained by earthen dikes or sand bags and remedied immediately.

Policy (2) Erosion control measures including minimizing clearing and grubbing and limiting exposure of erodible surface to 750,000 square feet for each location.

Minimum vegetation will be disturbed while maintaining the road within its present imprint. Minimum grubbing or clearing is planned.

Policy (3) Construction of footings in water by sheet pile cofferdam method and pumping water from within the dam to settling ponds before returning it to the water.

Policy (3) is not applicable to this project.

Policy (4) Isolation of the construction area by sand dikes.

Policy (4) is not applicable to this project. However, if any type of toxic material spill occurs, it will be reported, contained by earthen dikes or sand bags and

remedied immediately.

Policy (5) Erection of barriers, covers, shields and other protective devices as necessary to prevent any construction materials, equipment or contaminants from falling or being thrown into the water.

Prevention measures are discussed in Policy (1). This policy not applicable to this project.

Policy (6) Construction of drainage facilities to control erosion and sedimentation.

Corrugated steel pipe culverts will be installed in several washes. They will be compacted within the washes to prevent erosion and/or ponding. Sand bags will be used to stabilize the banks.

Policy (7) Provision of an adequate means, such as a bypass channel, to carry a stream free from mud and silt around operations to remove material from beneath a flowing stream.

Placement of structures will occur while washes are inactive and dry; no materials will be remove from flowing stream channels. Therefore, this policy is not applicable.

Policy (8) A requirement for transportation of materials across live streams to be conducted without muddying the stream. Mechanized equipment should not be operated in stream channels of live streams except as may be necessary to construct crossings or barriers and fills at channel changes.

This Policy is applicable to the San Pedro River area. No work is planned for the immediate river area. Two mostly dry washes just east of the river will have culverts installed if written agreement can be reached with the BLM.

Policy (9) A requirement for wash water from aggregate washing or other operations containing mud or silt to be treated by filtration or retention in a settling pond, or ponds, adequate to prevent muddy water from entering live streams.

This policy is not applicable to this project, as no aggregate will be washed.

Policy (10) A requirement for oily or greasy substances originating from the contractor's operations not be placed where they will enter a live stream.

Construction equipment will be monitored and maintained to ensure that no significant amounts of oils or greases are allowed to contaminate the construction or storage sites. Personnel will immediately clean and properly dispose of any oils or greases accidently spilled. Other prevention measures are discussed in Policy (1).

Policy (11) Provisions for Portland Cement or fresh Portland cement concrete not to be allowed to enter flowing water of streams.

This policy is not applicable to this project, as there are no plans to use any concrete mixtures.

Policy (12) A requirement to return the flow of streams as nearly as possible to a meandering thread without creating a possible future bank erosion problem when operations are completed.

Stream flows will not be altered from their original course by this project, therefore this policy is not applicable.

Policy (13) A requirement that material derived from roadway work should not be deposited in a live stream channel where it could be washed away by high stream flows.

Care will be taken so that material will not be washed or deposited in a stream area. If this should occur work crews will remove the material to a safe position.

Policy (Other Pollutants) A requirement that plans and procedures be prepared for facilities and activities within a watercourse to protect water from pollution with fuels, oil, bitumens, calcium chloride and other harmful materials.

The project as described, does not contain pollutants. In addition, to reduce the potential for spills, refueling and repair areas will be located well away from washes. Any spill of toxic material will be reported immediately, contained and remedied immediately. Clean material will be used to construct structures; no polluted silt or other material will be

placed in the washes. Debris and rock will be removed upon completion of the project. Debris that has polluted washes within the project area will be cleaned up by project personnel.

Policy (Monitoring) The person responsible for the activity should be required to monitor for turbidity every day in which there is a disturbance of the bed of the waterway. Monitoring should be performed not greater than one and one-half miles downstream from the construction or related operations, and may be required at different frequencies and for other parameters to demonstrate compliance with water quality standards.

Placement of water control structures in the washes will occur while all washes are dry. Therefore, this policy is applicable only in the San Pedro River area. No work is planned in the immediate river area. Two washes east of the river are scheduled for installation of culverts. Any loss of materials into these washes could and will be contained well away from the flowing water.

Appendix C

Request Letters, Replies and Other Correspondence

DEPARTMENT OF THE ARMY
LOS ANGELES DISTRICT, CORPS OF ENGINEERS
P.O. BOX 2711
LOS ANGELES, CALIFORNIA 90053-2325

December 4, 1992

REPLY TO
ATTENTION OF

Office of the Chief
Environmental Resources Branch

Mr. Sam F. Spiller
Field Supervisor
U.S. Fish and Wildlife Service
3616 W. Thomas, Suite 6
Phoenix, Arizona 85019

Dear Mr. Spiller:

Please provide current lists of any endangered, threatened, proposed, or candidate species, pursuant to the Endangered Species Act of 1973, that may be affected by the proposed Joint Task Force Six (JTF-6) Operation-92/93 projects in Arizona.

The overall JTF-6 Operation-92/93 will cover five project sites along or near the border of the United States and Mexico. The projects are located in Arizona in the vicinity of Nogales, Douglas, Naco, Sasabe, and the Quijotoa Mountains. Projects will include road maintenance, road improvements, and fence construction. Detailed project descriptions and maps are enclosed for each project (enclosures 1 to 5).

Please respond to this species list request within thirty (30) days of receipt of this letter. We will require a separate list for each project. Should you require additional information or have any questions, please contact Ms. Lois Goodman at (213) 894-0535 for the Douglas and Naco projects or Dr. Emily Carter at (213) 894-5082 for the Nogales, Sasabe, and Quijotoa Mountains projects.

Thank you for your assistance in this matter.

Sincerely,

Robert S. Joe
Chief, Planning Division

Enclosures

UNITED STATES
DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE
ARIZONA ECOLOGICAL SERVICES FIELD OFFICE
3616 West Thomas Road, Suite 6
Phoenix, Arizona 85019

Telephone: (602) 379-4720 FAX: (602) 379-6629

2-21-93-I-027

January 6, 1993

Robert S. Joe
Office of the Chief
Environmental Resources Branch
Department of the Army
Los Angeles District, Corps of Engineers
P.O. Box 2711
Los Angeles, California 90053-2325

Dear Mr. Joe:

This letter is in response to your December 4, 1992, request for lists of endangered, threatened, or other species of special concern in the vicinity of JTF-6 Operation-92/93 projects in Arizona.

Federal endangered and candidate species which may be found in the vicinity of projects include:

DOUGLAS AREA:

Endangered Species
- Lesser long-nosed bat (Leptonycteris curasoae yerbabuenae)

Threatened Species
- Cochise pincushion cactus (Coryphantha robbinsorum)

Category 1 Species
- Southwestern willow flycatcher (Empidonax traillii extimus)
- Cactus ferruginous pygmy owl (Glaucidium brasilianum cactorum)

Category 2 Species

Reptiles
- Canyon spotted whiptail (Cnemidophorus burti)
- Texas horned lizard (Phrynosoma cornutum)
- Mexican garter snake (Thamnophis eques)

Amphibians
- Lowland leopard frog (Rana yavapaiensis)
- Chiricahua leopard frog (Rana chiricahuensis)

Plants
Playa Spider Flower (Cleome multicaulis)
Needle-spined pineapple cactus (Echinomastus erectocentrus var. erectocentrus)
Huachuca golden-aster (Heterotheca rutteri)
Limestone Arizona rosewood (Vauquelinia californica ssp. pauciflora)
Cynanchum wigginsii
Pectis imberbis

Mammals
California leaf-nosed bat (Macrotus californicus)
Mexican long-tongued bat (Choeronycteris mexicana)
Southwestern cave bat (Myotis velifer brevis)

NACO AREA:

Endangered Species
Lesser long-nosed bat (Leptonycteris curasoae yerbabuenae)

Category 1 Species
Southwestern willow flycatcher (Empidonax traillii extimus)
Cactus ferruginous pygmy owl (Glaucidium brasilianum cactorum)
Acuna Cactus (Echinomastrus erectocentrus var. acunensis)

Category 2 Species
Reptiles
Canyon spotted whiptail (Cnemidophorus burti)
Texas horned lizard (Phrynosoma cornutum)
Mexican garter snake (Thamnophis eques)

Amphibians
Lowland leopard frog (Rana yavapaiensis)
Chiricahua leopard frog (Rana chiricahuensis)

Plants
Cynanchum wigginsii

Mammals
California leaf-nosed bat (Macrotus californicus)
Mexican long-tongued bat (Choeronycteris mexicana)
Southwestern cave bat (Myotis velifer brevis)
Arizona shrew (Sorex arizonae)

SASABE/QUIJOTOA MTN AREA:
Endangered Species
Lesser long-nosed bat (Leptonycteris curasoae yerbabuenae)
Kearney's blue star (Ansonia kearneyana)
Tumamoc globeberry (Tumamoca macdougalii)

Proposed Endangered
Pima pineapple cactus (Coryphantha scheeri var. robustispina)

Category 1 Species
Southwestern willow flycatcher (Empidonax traillii extimus)
Cactus ferruginous pygmy owl (Glaucidium brasilianum cactorum)
Catalina beardtongue (Penstemon discolor)
Gentry indigo bush (Dalea tentaculoides)

Category 2 Species

Reptiles

Canyon spotted whiptail (Cnemidophorus burti)
Texas horned lizard (Phrynosoma cornutum)
Mexican garter snake (Thamnophis eques)
Chuckwalla (Sauromalus obesus)
Sonoran Desert tortoise (Gopherus agassizii)

Amphibians

Lowland leopard frog (Rana yavapaiensis)
Chiricahua leopard frog (Rana chiricahuensis)

Plants

Saiya (Amoreuxia gonzalezii)
Santa Cruz star leaf (Choisya mollis)
Cynanchum wigginsii
Huachuca golden-aster (Heterotheca rutteri)
Pectis imberbis
Phaesolus supinus

Mammals

California leaf-nosed bat (Macrotus californicus)
Mexican long-tongued bat (Choeronycteris mexicana)
Southwestern cave bat (Myotis velifer brevis)
Underwood's mastiff bat (Eumops underwoodi sonoriensis)

Endangered and threatened species must be considered in the development of projects. Candidate species are those which may in the future be considered for listing as endangered or threatened species. Category 1 candidates are those for which the Fish and Wildlife Service has substantial information to support proposing to list the species as endangered or threatened. Category 2 candidates are those for which such information is not available and for which we are seeking conclusive data on biological vulnerability and threats. Although candidate species have no legal protection, we would appreciate your consideration of them in the development of the projects.

Please note that the Arizona Game and Fish Department may know of species in the area that are State-listed or that are of management concern.

In future communications on this project, please refer to consultation number 2-21-93-I-027. If we may be of further assistance, please contact Lorena Wada or me.

Sincerely,

Sam F. Spiller

Sam F. Spiller
Field Supervisor

cc: Director, Arizona Game and Fish Department, Phoenix, Arizona

DEPARTMENT OF THE ARMY
LOS ANGELES DISTRICT, CORPS OF ENGINEERS
P.O. BOX 2711
LOS ANGELES, CALIFORNIA 90053-2325

December 7, 1992

REPLY TO
ATTENTION OF

Office of the Chief
Environmental Resources Branch

Mr. Fenton Kay
Heritage Management System Manager
Arizona Department of Game and Fish
2221 West Greenway Road
Phoenix, Arizona 85023

Dear Mr. Kay:

Please provide current lists of species or other biological resources of concern to the Arizona Game and Fish Department that may be affected by the proposed Joint Task Force Six (JTF-6) Operation-92/93 projects in Arizona.

The overall JTF-6 Operation-92/93 will cover five project sites along or near the border of the United States and Mexico. The projects are located in Arizona in the vicinity of Nogales, Douglas, Naco, Sasabe, and the Quijotoa Mountains. Projects will include road maintenance, road improvements, and fence construction. Detailed project descriptions and maps are enclosed for each project (enclosures 1 to 5).

Please respond to this request for information at your earliest possible convenience. We will require a separate list for each project. Should you require additional information or have any questions, please contact Ms. Lois Goodman at (213) 894-0535 for the Douglas and Naco projects or Dr. Emily Carter at (213) 894-5082 for the Nogales, Sasabe, and Quijotoa Mountains projects.

Thank you for your assistance in this matter.

Sincerely,

Robert S. Joe
Chief, Planning Division

Enclosures

THE STATE OF ARIZONA

GAME & FISH DEPARTMENT

2221 West Greenway Road, Phoenix, Arizona 85023-4399 (602) 942-3000

Governor
Fife Symington

Commissioners:
Gordon K. Whiting, Central, Chairman
Larry Taylor, Yuma
Elizabeth T. Woodin, Tucson
Arthur Porter, Phoenix
Nonie Johnson, Snowflake

Director
Duane L. Shroufe

Deputy Director
Thomas W. Spalding

December 22, 1992

Mr. Robert S. Joe
Corps of Engineers
Los Angeles District
P.O. Box 2711
Los Angeles, California 90053-2325

Dear Mr. Joe:

Re: Special Status Species; Joint Task Force Six, Border Road Maintenance, Naco, Arizona

The Arizona Game and Fish Department (Department) has reviewed your letter of December 7, 1992, regarding the presence of special status species in the vicinity of Naco, Arizona, and the following comments are provided.

The Department's Heritage Data Management System has been accessed and current records show that the special status species listed below have been documented as occurring in the project vicinity.

COMMON NAME	SCIENTIFIC NAME	STATUS
Baird's sparrow	Ammodramus bairdii	**ST,S**
massasauga	Sistrurus catenatus	**SE,S**
Southwestern cave myotis	Myotis velifer brevis	**C2,S**

STATUS DEFINITIONS

C2 - Category 2 Candidate as listed by the U.S. Fish and Wildlife Service under the Endangered Species Act. Species being considered for listing as Threatened or Endangered pending more information.

SE - State Endangered on the Arizona Game and Fish Department's listing of **Threatened Native Wildlife in Arizona** (TNW). Species extirpated from Arizona since the mid-1800s or for which extinction or extirpation is highly probable without conservation efforts.

ST - State Threatened on the Department's TNW list. Species with identified, serious threats and populations lower than they were historically and/or extremely local and small.

S - Classified as **"sensitive"** by the Regional Forester when occurring on lands managed by the U.S. Forest Service.

The Department recommends that the species noted above be considered during the planning and development of this project.

Thank you for the opportunity to provide this information. If you have any questions, please contact me at (602) 789-3605.

Sincerely,

Nancy Olson

Nancy Olson
Project Evaluation Specialist
Habitat Branch

NLO:no

cc: Gerry Perry, Regional Supervisor, Region V, Tucson

DEPARTMENT OF THE ARMY
LOS ANGELES DISTRICT, CORPS OF ENGINEERS
P.O. BOX 2711
LOS ANGELES, CALIFORNIA 90053-2325

January 8, 1993

REPLY TO
ATTENTION OF:

Office of the Chief
Environmental Resources Branch

Mr. James Garrison
State Historic Preservation Officer
Arizona State Parks
800 West Washington, Suite 415
Phoenix, Arizona 85007

Dear Mr. Garrison:

The Los Angeles District Corps of Engineers (Corps) is assisting JTF-6 in a road improvement project near Naco, Cochise County. The proposed project consists of light grading and some erosion control work along 22 miles of existing border road. The existing road was improved in 1991 by JTF-6. The purpose of this project will be to perform routine maintenance, and repair portions of the road which have experienced erosion problems since 1991. This work is scheduled for February and March of 1993. A copy of the draft environmental assessment is enclosed for your review (enclosure 1).

The area of potential effects (APE) was surveyed by Geo-Marine in 1991 for the original construction. A copy of this report is on file with your office. A portion of the proposed road was also surveyed by the Bureau of Land Management. In addition, a field visit was made of the proposed project area by the Corps archeological staff in December, 1992 (enclosure 2). Based on these reports there are ten archeological sites near the APE. These are AZ:EE:12:38,40,43,44,45,41,; FF:9:12,13,14. The APE is defined as the width of the existing road, and any staging, or bivouac areas.

All road improvement work will take place within the original imprint of the road. In addition, construction will be monitored by an archeologist to ensure that all sites are avoided. Construction crews will be made aware of the need to avoid impacts to these sites, and to stay within established project boundaries. Based on these measures, the Corps has determined that the proposed Naco Road improvement project will not effect National Register listed, or eligible resources.

Please review the enclosed information. If you agree with our determination please transmit your concurrence within thirty days. If you have any questions on this project please call Mr. Stephen Dibble, Senior Archeologist at (213) 894-3399.

Sincerely,

Robert S. Joe
Chief, Planning Division

Enclosures

CONCUR

ARIZONA STATE HISTORIC PRESERVATION OFFICER
ARIZONA STATE PARKS BOARD 1/13/93

CWE

ARIZONA STATE PARKS

800 W. WASHINGTON
SUITE 415
PHOENIX, ARIZONA 85007
TELEPHONE 602-542-4174

January 20, 1993

Robert S. Joe
Chief, Planning Division
U.S. Army Corps of Engineers
Los Angeles District
Attn: Ms. Laura Tschudi (CESPL-PD-RL)
Chief, Environmental Design Section
P.O. Box 2711, Room 6650
Los Angeles, CA 90053-2325

RE: Joint Task Force Six, Naco Road Maintenance and Repair Project, DOD

Dear Mr. Joe:

Thank for for sending us a copy of the draft Environmental Assessment (EA) for the above project. I have reviewed this document and have the following comments pursuant to 36 CFR Part 800:

In my opinion, the draft EA adequately considers potential impacts to cultural resources and includes provisions for consultations with this office. Thus, we accept the EA as written and also concur with the agency's Finding of No Significant Impact (FONSI).

For your information, I have already consulted with your office regarding the effect of this project on historic properties. During those consultations the agency and this office concurred on a determination of no effect based on the protective measures initiated by the agency and complete avoidance of the National Register eligible sites.

We appreciate your continued cooperation with this office in complying with the historic preservation requirements for Federal undertakings. If you have any questions, please contact me at 542-4174 or 542-4009.

Sincerely,

Robert E. Gasser
Compliance Coordinator
State Historic Preservation Office

DEPARTMENT OF DEFENSE
JOINT TASK FORCE SIX
FORT BLISS, TEXAS 79916-0058

January 27, 1993

REPLY TO ATTENTION OF
Staff Engineer

Mr. Conrad G. Keyes
International Boundary and Water Commission
4171 North Mesa, Suite C-310
El Paso, Texas 79902

Dear Mr. Keyes:

Thank you for your letters of January 15, 1993 responding to draft Environmental Assessments in San Diego, California and Southern Arizona.

The purpose of this letter is to inform you of our intent to start construction of the various projects outlined in the Environmental Assessments as outlined below:

PROJECT	CONSTRUCTING UNIT	PERSONNEL	EQUIPMENT	DATE
Naco, Cochise County, AZ Road Construction	B Company 864 Engr Bn	80	Motor graders, dozers, scrapers, dump trucks, vibratory compactors	8 Feb 93
Douglas, Cochise County, AZ Road Construction	B Company 864 Engr Bn	80	Motor graders, dozers, scrapers, dump trucks, vibratory compactors	8 Feb 93
San Diego, California Fence Construction	63rd ARCOM Task Force Steel Ribbon	50	Dozer, auger, crane, flat bed cargo truck, portable welders	16 Feb 93

Response to specific concerns raised in your letter about work on the border follows:

It is Joint Task Force Six policy that no service member enter Mexico for any reason, whether work related or on leisure time. Extreme care will be taken to ensure that no spoil material, construction material, or equipment will encroach on Mexican territory.

We are aware of your concerns about intervisibility of the boundary monuments, and plan all fence alignments to allow for this intervisibility.

The road improvement work should not alter drainage patterns in any way, as the existing road alignment and grade will be maintained. Culvert work and drainage improvement is intended to prevent further erosion, not divert drainage patterns.

My staff engineer has worked closely with your engineer section concerning designs of the fence section and "flood gate" in Smuggler's Gulch. It is our understanding that your engineers have approved the design and provided a desirable alignment of the fence in the Smuggler arroyo that avoids the large sewage pipe. We intend to incorporate that design and alignment in our construction plan. Access gates will be provided.

Design of drainage structures in Goat Canyon where intermittent washes are encountered is depicted in the enclosed drawing. The precise alignment of the fence fluctuates so as not to impact on critical habitat. The fence in Goat Canyon will be approximately 20 meters from the international boundary.

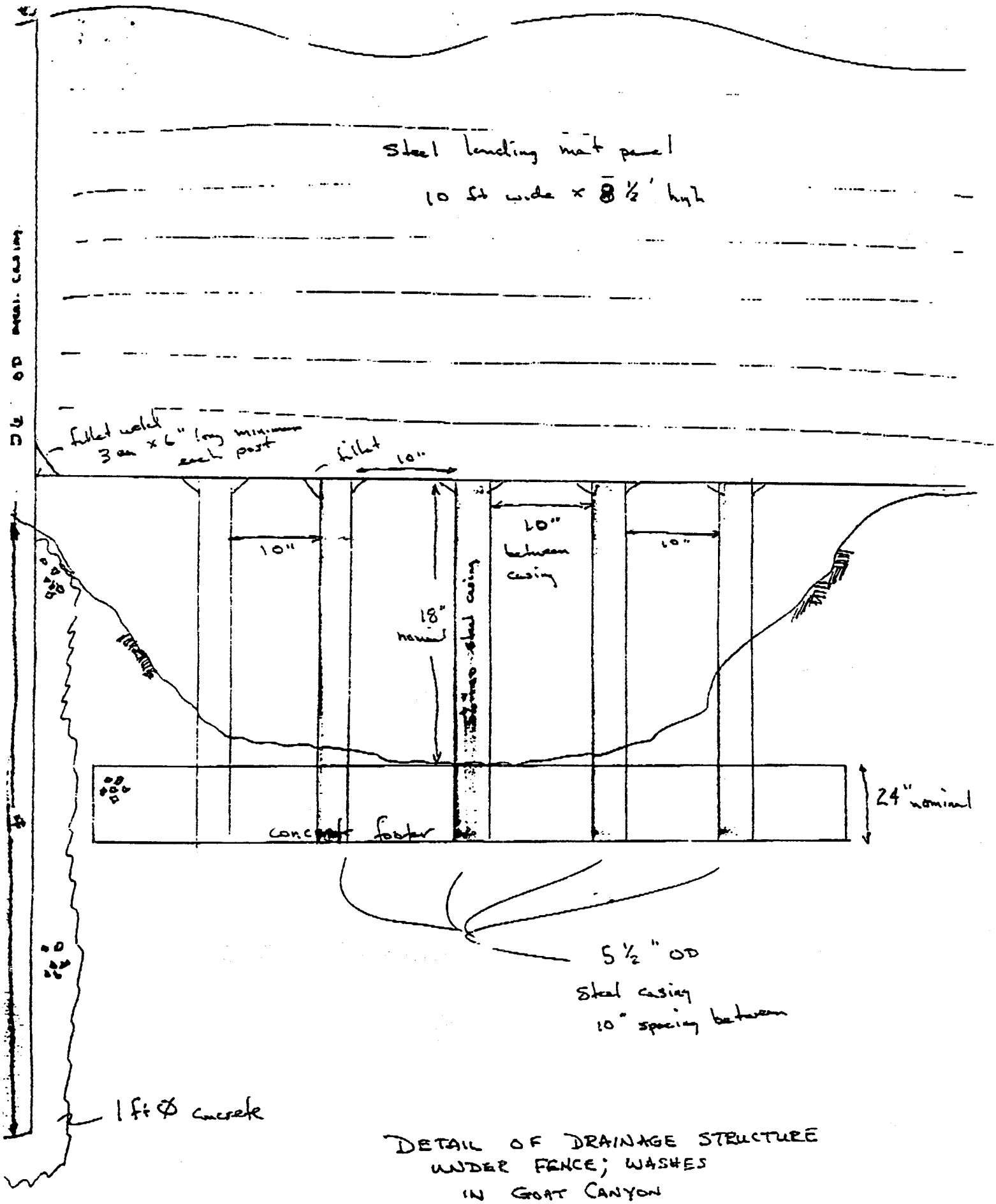
Thank you for your continued cooperation.

Joint Task Force Six - "Service to the Nation."

Sincerely,

Terry L. Thompson
Colonel, U.S. Air Force
Chief of Staff

Enclosure



DETAIL OF DRAINAGE STRUCTURE UNDER FENCE; WASHES IN GOAT CANYON

ENCLOSURE

Appendix D

Letters of Comment and Responses

DL

UNITED STATES
DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE
ARIZONA ECOLOGICAL SERVICES FIELD OFFICE
3616 West Thomas Road, Suite 6
Phoenix, Arizona 85019

Telephone: (602) 379-4720 FAX: (602) 379-6629

January 20, 1993

Colonel R.L. VanAntwerp
District Engineer
U.S. Army Corps of Engineers
Los Angeles District
Attn: Ms. Laura Tschudi, Chief
Environmental Design Section
300 North Los Angeles Street
Los Angeles, CA 90012-2325

Dear Colonel VanAntwerp:

The U.S. Fish and Wildlife Service (Service) has reviewed the draft Environmental Assessment (EA) prepared for the Joint Task Force Six (JTF-6) Project at Naco, Cochise County, Arizona. We appreciate the efforts of the U.S. Army Corps of Engineers (Corps) in preparing the draft EA. Our comments are enclosed for your review.

In Section 1.1, Project Summary, we note that the military unit may work at the project site up to March, 1994. The EA notes that resource agencies will be notified about delays in the schedule. We request that the Service be included on the notification list, and that we also be notified of intended start-up dates for this project. COMMENT #1

Section 2 under the draft Finding of No Significant Impact statement notes that gravel and several culverts will be placed in several washes to improve the road in some areas. Desert washes are important to wildlife as movement corridors and sources of food and cover, and washes generally have a higher density and diversity of species than the surrounding desert. The Service stresses the need for protection of all desert washes. COMMENT #2

As with the Douglas site, we support the Army's use of previously disturbed areas for staging and bivouac sites as noted with the Project Summary. We request that activities within these areas be restricted to within the boundaries of previous disturbance. COMMENT #3

The Project Summary notes (p. 2) that monitors will be utilized in any area that contains sensitive resources. A qualified biologist should act as monitor and should be present at the site at all times, from initial surveys through final clean-up. The biologist and all construction COMMENT #4

personnel should be briefed on the environmental commitments made in the EA. We agree that the monitor should be a qualified biologist familiar with the EA, as stated on page 37. However, we also believe it is important to use a biologist who has a thorough knowledge of the project site. For this reason, someone who has been in the state of Arizona for a substantial length of time would be best qualified to serve as monitor.

Section 4.0, Proposed Action, indicates that work within the San Pedro Conservation Area will be coordinated with the Bureau of Land Management (BLM), and will be agreed upon in writing beforehand. As you are aware, the San Pedro River supports riparian vegetation at the point where it is crossed by the border road. Riparian areas are important habitat for a large variety of species, and this is the only river that supports riparian habitat within this project site. Plants in this area include mature cottonwood (Populus fremontii) and Goodding willow (Salix gooddingii), as well as a variety of grasses and annuals. Field investigations conducted on December 1, 1992, noted that fish were present in the river. The Service believes this area to be the most important area within the Naco project site. For this reason, we request that the written agreement formed between the Corps and BLM be included within the final EA. COMMENT #5

The U.S. Army project leader, Ken Nadermann, stated that no heavy equipment would cross the San Pedro as crews could work up to the river from each side. We request that all heavy equipment and construction be kept outside of the 100-year floodplain in order to adequately protect the riparian area associated with the San Pedro. In addition, we would like to be notified when road maintenance operations will be occurring in the vicinity of the San Pedro River. COMMENT #6

Section 6.3 on Water Quality cites data from 1986-87. We have included a copy of a report completed by the Service in June 1992 which provides more recent information which you may want to incorporate in the final EA. COMMENT #7

Section 6.5.1 discusses vegetation identified within the project site. In addition to the list provided on page 11, we noted the following plants during field investigations: COMMENT #8

Cirsium sp., Thistle
Datura discolor, Desert Thorn Apple
Ephedra sp., Mormon Tea
Opuntia sp., Prickly Pear
Opuntia violacea, Purple Prickly Pear
Opuntia sp., Cholla
Sporobolus airoides, Alkali Sacaton
Tamarix sp., Salt Cedar

In addition, we have compiled the following list of wildlife species which should be included, either as part of the EA or in an appendix:

Fish:

Agosia chrysogaster, Longfin dace (Native)
Gambusia affinis, Mosquitofish (Non-native)
Pantosteus clarki, Desert sucker (Native)

Amphibians and Reptiles:

COMMENT #9

Bufo debilis insidior, Western green toad
Cnemidophorus uniparens, Desert grassland whiptail
Ficimia cana, Western hooknose snake
Heterodon nasicus bennerlyi, Mexican hognose snake
Holbrookia texana scitula, Southwestern earless lizard
Terrapene ornata luteola, Desert box turtle

Mammals:
Ammospermophilus harrisii, Harris' antelope squirrel
Antrozous pallidus, Pallid bat (Winter Range)
Bassariscus astutus, Ringtail
Canis latrans mearnsi, Coyote
Choeronycteris mexicanis, Long-tongued bat (Summer only)
Conepatus mesoleucus venaticus, Hog-nosed skunk
Cynomys gunnisoni zuniensis, Gunnison's prairie dog
Dipodomys ordii, Ord's kangaroo rat
Dipodomys merriami olivaceus, Merriam's kangaroo rat
Dipodomys spectabilis, Banner-tailed kangaroo rat
Eptesicus fuscus, Big brown bat (Winter Range)
Eutamias dorsalis, Cliff chipmunk
Felis concolor azteca, Mountain lion
Felis rufus baileyi, Bobcat
Lasionycteris noctivigans, Silver-haired bat
Lasiurus borealis, Hairy-tailed bat (Summer Only)
Lasiurus cinereus, Hoary bat (Winter Range)
Lasiurus ega xanthinus, Southern yellow bat
Leptonycteris sanborni, Sanborn's long-nosed bat
Lepus alleni, Antelope jack rabbit
Lepus californicus eremicus, Black-tailed jack rabbit
Macrotus californicus, California leaf-nosed bat
Mephitis macroura milleri, Hooded skunk
Mephitis estor, Striped skunk
Mustela frenata neomexicana, Long-tailed weasel
Myotis auriculus apache, Southwestern myotis
Myotis thysanodes, Fringed myotis (Winter Range)
Myotis velifer, Cave Myotis(Winter Range)
Myotis yumanensis, Yuma myotis

Myotis volans interior, Long-legged myotis
Myotis californicus, California myotis
Myotis leibii melanorhinus, Small-footed myotis
Nasua, Coati
Neotoma albigula, White-throated wood rat
Neotoma mexicana, Mexican wood rat
Odocoileus hemionus crooki, Mule deer
Odocoileus virginianus couesi, White-tailed deer
Onychomys leucogaster ruidosae, Northern grasshopper mouse
Onychomys torridus, Southern grasshopper mouse
Perognathus flavus, Silky pocket mouse
Perognathus hispidus conditi, Hispid pocket mouse
Perognathus intermedius, Rock pocket mouse
Perognathus penicillatus, Desert pocket mouse
Peromyscus boylii rowleyi, Brush mouse
Peromyscus eremicus, Cactus mouse
Peromyscus leucopus arizonae, White-footed mouse
Peromyscus maniculatus sonoriensis, Deer mouse
Pipistrellus hesperus, Western pipistrelle (Winter Range)
Plecotus townsendii, Townsend's big-eared bat
Procyon lotor pallidus, Raccoon
Reithrodontomys fulvescens, Fulvous harvest mouse
Reithrodontomys megalotis, Western harvest mouse
Reithrodontomys montanus, Plains harvest mouse
Sciurus nayaritensis chiricahuae, Mexican fox squirrel
Sigmodon arizonae cienegae, Arizona cotton rat
Sigmodon fulviventer minimus, Fulvous cotton rat
Sigmodon ochrognathus, Yellow-nosed cotton rat
Spermophilus spilosoma canescens, Spotted ground squirrel
Spermophilus tereticaudus neglectus, Round-tailed ground squirrel
Spermophilus variegatus grammurus, Rock squirrel
Spilogale gracilis leucoparia, Western spotted skunk
Sylvilagus audubonii minor, Desert cottontail
Sylvilagus floridanus holzneri, Eastern cottontail
Tadarida brasiliensis mexicana, American free-tailed bat (Winter Range)
Tadarida femorosacca, Pocketed free-tailed bat
Taxidea taxus berlandieri, Badger
Tayassu tajacu sonoriensis, Javelina
Thomomys bottae carri, Botta's pocket gopher
Thomomys bottae mearnsi, Botta's pocket gopher
Thomomys umbrinus intermedius, Southern pocket gopher
Urocyon cinereoargenteus scottii, Gray fox
Vulpes macrotis neomexicana, Kit fox

This list represents species which may occur in the area based on habitat preference, actual observations, and distribution maps as provided in Brown (1973 and 1982) and Hoffmeister (1986).

The Service requests that scientific names be used when referring to species within the document. As with the Douglas site, lack of scientific names has lead to some doubt as to which species is meant by Coue's deer (p. 13). Hoffmeister (1986) lists the white-tailed deer species in Arizona as the subspecies Odocoileus virginianus couesi. The EA indicates both white-tailed deer and Coue's deer. COMMENT #10

A formal species list request was received in our office on December 7, 1992. A response was forwarded in compliance with your request on January 6, 1993. This information can now be incorporated into the final EA for those sections of the report which reference endangered species (pgs. 14, 31, 33). As you are aware, endangered and threatened species are protected under the Endangered Species Act and must be considered prior to project development. While candidate species are not protected under Federal Law, we recommend your consideration of them during project development. In addition, we recommend the following changes to the existing section of the EA: COMMENT #11

Paragraph 3, page 14: Delete the sentence "These bats are adapted for life in arid deserts of the southwestern U.S., Mexico, and Central America." These bats live in areas other than arid deserts.

Paragraph 3, page 14: Add "...and southern..." between "central" and "Mexico" on line 10 of the paragraph.

Section 7.5.1 on the Proposed Action and its impacts to vegetation notes that "Some vegetation will be removed where culverts will be installed or repaired, where minor widening or straightening is required, at staging or equipment storage areas, and at borrow sites." A detailed discussion of impacts to vegetation follows. The Service would like to reiterate that vegetation provides habitat for numerous wildlife species in the area. Therefore, loss of any type of vegetation should be minimized, regardless of whether the species is considered a "common" species or a special status species. COMMENT #12

Section 7.5.1 also notes that "If borrow is limited to disturbed areas and to the grassy area on the west side of the hills, no significant impact will occur." The Service requests that this statement be modified to reflect that borrow will be limited to the disturbed area discussed during field investigations, and that the Army will exercise caution to avoid placement of any of the existing hill into the wash north of the borrow pit. COMMENT #13

Section 7.5.3 indicates that any non-flowering agave plants which will unavoidably be impacted by construction activities will be relocated. The final EA should specify who will be relocating the plants and the techniques to be used in relocation efforts. COMMENT #14

Section 7.5.4 states that "None of the federal candidate species have a high potential for occurring on site..." This statement needs to be substantiated by background information which resulted in this conclusion. It is possible that the four days of field investigation were insufficient to accurately determine species present in the area due to the time of year and the time of day. Mexican long-tongued bat (Choeronycteris mexicana), a Category 2 species, is listed as present in this area only during the summer. COMMENT #15

Section 9.5 on the Endangered Species Act indicates that no formal consultation is necessary pursuant to Section 7 of the Act. If transplant techniques for non-flowering agave provided in the final EA are adequate to ensure survival of the relocated agave, and if these techniques are correctly implemented, the Service does not anticipate a need for formal Section 7 consultation. COMMENT #16

Section 10.0 on Environmental Commitments indicates that waste and construction material will not be piled near the International Boundary. The final EA should indicate final disposal sites. COMMENT #17

Subsection 10.10 states that "Roads will be maintained and upgraded where they presently lay, except where environmental constraints recommend modification or movement of roads." This statement should not appear in the final EA as it is too broad and leaves interpretation to whoever is implementing a given portion of the plan. Modifications should be limited to those listed in Section 7.5.1 under Proposed Action (p. 21). COMMENT #18

This EA does not propose clearing an additional 10 feet of land alongside the existing road during maintenance activities. The Service would like to reiterate that we believe construction activities can be limited to the existing cleared surface. Field investigations on December 1, 1992, indicated wide areas adjacent to the road which had been cleared during the previous year's construction activities. Rehabilitation was beginning in these areas, and grasses and annuals were present. Construction activities this year should not interfer with the on-going rehabilitation of these areas. COMMENT #19

We appreciate the opportunity to provide comments on this EA. If you have any question, please contact Mary Richardson or Don Metz.

Sincerely,

Sam F. Spiller
Field Supervisor

cc: Regional Director, Fish and Wildlife Service, Albuquerque, New Mexico (AES)
Director, Arizona Game and Fish Department, Phoenix, Arizona (Attn: Rick Gerhardt)
Environmental Division, HQ TRADOC, ATBO-L, Ft. Monroe, Virginia (Attn: Robert Anderson)

Enclosure (1)

Literature Cited

Brown, D.E. 1982. Biotic Communities of the American Southwest-United States and Mexico. Desert Plants, Volume 4, Numbers 1 - 4. University of Arizona, Tucson, Arizona. 342 pp.

Brown, D.E. 1973. The Natural Vegetative Communities of Arizona, State of Arizona, Arizona Resources Information System (ARIS). Phoenix. Map (Scale 1:500,000).

Hoffmeister, D.F. Mammals of Arizona. The University of Arizona Press. Tucson, Arizona. 602 pp.

RESPONSES TO COMMENTS

Letter from U.S. Fish and Wildlife Service
January 20, 1993

Response to Comment 1 - The Service (FWS) will be notified of start-up dates for the project, including any delays. Notification may be informal, by telephone, because the Corps does not always have sufficient lead time to prepare a formal written notice.

Response to Comment 2 - The Corps concurs with the need to protect desert washes. The gravel and culverts will be placed in highly disturbed portions of washes, where they cross the existing road. Little habitat to either side of the road will be disturbed. These road improvements will remove little food and cover in the washes, and, except during construction, will not impair movement. When the washes are dry, culverts will allow wildlife to safely cross under the road.

Response to Comment 3 - The Army will use previously disturbed bivouac sites, and to the extent possible, previously disturbed staging areas.

Response to Comment 4 - Project constraints are such that monitoring be limited to critical periods during mobilization, construction, and demobilization. On January 22, 1993, the Corps and FWS informally coordinated this issue, and it was agreed that 100% monitoring would not be required. On 21 January 1993 the COE biologist briefed construction personnel on environmental commitments and other biological considerations.

Response to Comment 5 - The Memorandum of Agreement (MOA) has been written and forwarded to the BLM for their signature. A copy of the signed MOA will be on file in the Los Angeles District and in JTF-6, and will be mailed to FWS as soon as it is received by COE.

Response to Comment 6 - All construction machinery will be kept out of the 100 year floodplain (zone A on attached map) of the San Pedro River. Any movement of machines or personnel to the west side of the river will be via the Arizona Highway 92 bridge north of the construction area.

Response to Comment 7 - The material provided has been reviewed. However, due to the avoidance of the immediate river area by this project, this data will not be included in the FEA.

Response to Comment 8 - These plant species have been added to Table 1.

Response to Comment 9 - We appreciate the list of wildlife species provided. Since the list of fish is very short, we have

Response to Comment 8 - These plant species have been added to Table 1.

Response to Comment 9 - We appreciate the list of wildlife species provided. Since the list of fish is very short, we have incorporated it into the text. The list of reptiles, amphibians, and mammals has been added to the FEA as Table 2.

Response to Comment 10 - We concur that Scientific names are normally used when first referring to a species. Due to the unusually high number of plant and animal names in the text, the scientific names are included in Table 1 (plants) and Table 2 (reptiles, amphibians, and mammals). The text has been revised to indicate that the scientific names can be found in the tables. The text has also been revised to refer to Coue's white-tailed deer rather than Coue's deer and white-tailed.

Response to Comment 11 - The updated information has been incorporated into the FEA (sections 6.5.3, 6.5.4, 7.5.3 and 7.5.4). Candidate species have been considered.

Response to Comment 11.1 - The sentence has been deleted as recommended.

Response to Comment 11.2 - The FEA has been revised as recommended.

Response to Comment 12 - Loss of vegetation and habitat will be minimized to the extent possible.

Response to Comment 13 - It was agreed in the field that if insufficient borrow material was available in the disturbed area, the grassy area could be used. We concur and will exercise caution to avoid placing borrow material into the wash. Areas to be avoided will be marked. The COE biological monitor shall be consulted three days in advance of any excavation of borrow material from this site.

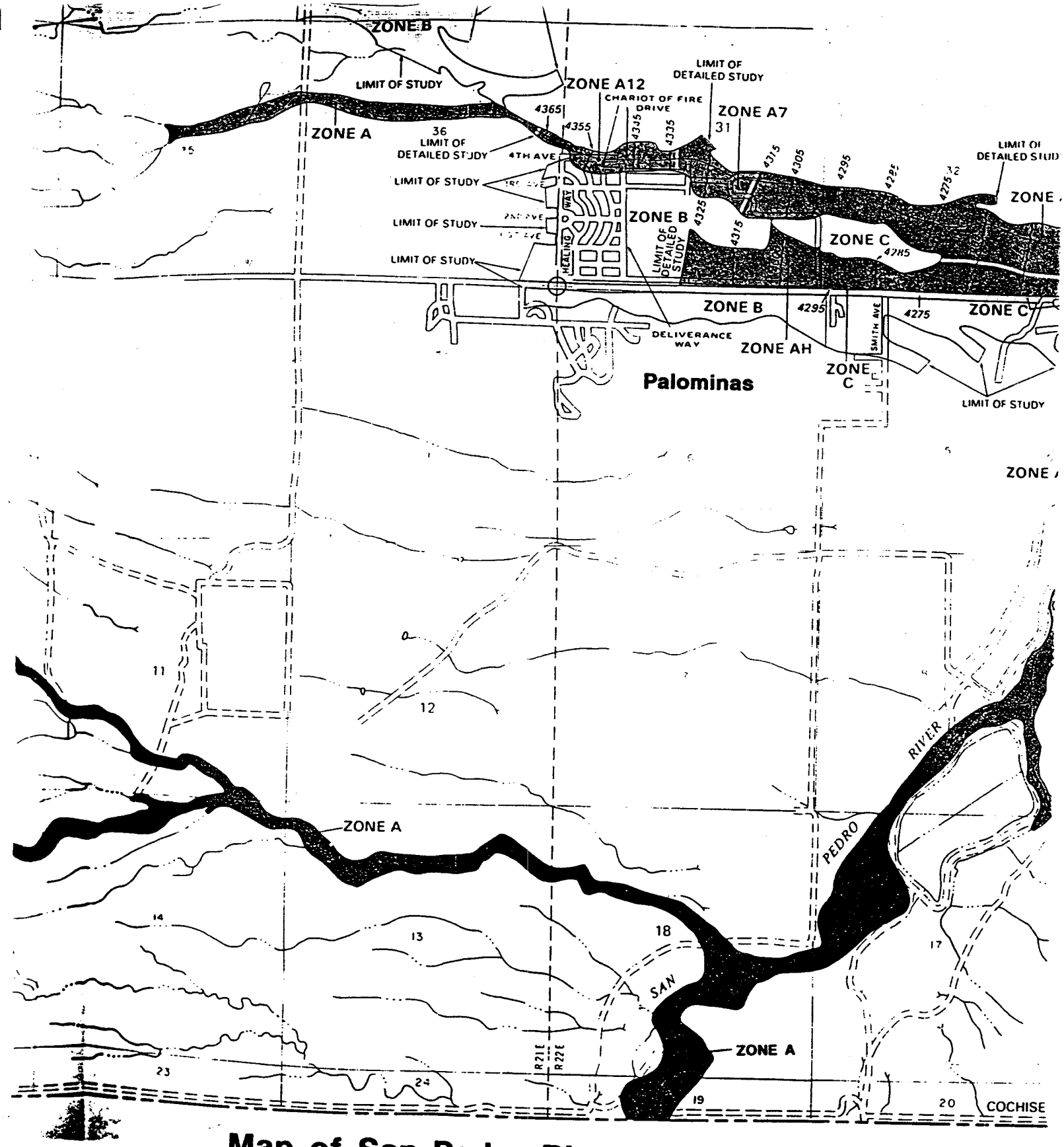
Response to Comment 14 - The Arizona Department of Agriculture will brief the Army on the procedures for transplanting agaves. Field surveys in November and December 1992 indicate that all agaves in the Naco project area can probably be avoided. If any agaves do require relocation, the Army will replant them under the supervision and assistance of the biological monitor per ADA specifications.

Response to Comment 15 - Section 7.5.4 has been completely revised based on updated information.

Response to Comment 16 - Comment noted. See response to Comment 14, above.

Response to Comment 17 - The text of EA Section 10.2 has been changed.

Response to Comment 19 - Construction activities can be limited to the existing cleared road surface, with a few exceptions.



Map of San Pedro River, Arizona

100 Year Flood Plain (Zone A)

INTERNATIONAL BOUNDARY AND WATER COMMISSION
UNITED STATES AND MEXICO

OFFICE OF THE COMMISSIONER
UNITED STATES SECTION

JAN 1 1993

Colonel R.L. VanAntwerp
District Engineer
U.S. Army Corps of Engineers
Los Angeles District
Attn: Ms. Laura Tschudi (CESPL-PD-RL)
P.O. Box 2711, Room 6650
Los Angeles, California 90053-2325

Dear Colonel VanAntwerp:

Thank you for the opportunity to review the Draft Environmental Assessment (DEA) for Border Road Maintenance & Repair, Naco, Cochise County, Arizona, dated December 1992.

As you are aware, the United States Section (U.S. Section) of the International Boundary and Water Commission, United States and Mexico (Commission) by virtue of the 1944 Water Treaty (TS 994; 59 Stat. 1219) and agreements concluded thereunder by the United States and Mexico is responsible for ensuring that the United States Government meets the obligations incurred in those agreements. We are pleased to note in Section 10.0, Environmental Commitments, that the proposed rehabilitation and reconstruction of the existing border road segments approximately 10.5 kilometers (6.5 miles) east of and approximately 25 kilometers (15.4 miles) west of the town of Naco will be performed in a manner that will not adversely impact upon: (1) the visibility and permanency of the international boundary monuments, (2) the present drainage patterns to and from Mexico, and (3) insure that potential sanitation problems are properly addressed so that no pollution occurs in either country.

We note that your operation will inform us thirty days in advance of the project's proposed start date, and detail the type of equipment and number of personnel to be involved. We thank you for this courtesy. We further note that you commit to avoid construction within 3 meters (10 feet) of the international border, and will insure that neither waste nor construction material is placed near the boundary. We appreciate this in view of the fact that the Mexican Government, through the International Boundary and Water Commission, has advised that any encroachment by personnel, equipment, and material associated with the road maintenance is not authorized.

Regarding the present drainage patterns to and from Mexico, we note that your operation will involve the installation of culverts, grading and shaping for drainage, and the placement of gravel in several

THE COMMONS, BUILDING C, SUITE 310 • 4171 N. MESA STREET • EL PASO, TEXAS 79902
(915) 534-6700 • (FTS) 570-6700

washes. We are pleased to read that your proposed project will not disturb existing drainage patterns and flow rates along the border. We ask that you provide the specific plans to PE Jose S. Valdez, (915) 534-6693, as soon as possible for our review insofar as it impacts on transboundary drainage.

Thank you again for the opportunity to review and comment on your proposed project. Please send us two (2) copies of the Final Environmental Assessment (EA) when it becomes available.

Sincerely,

Osborne H Lingnat

for Conrad G. Keyes, Jr.
Principal Engineer, Planning

RESPONSES TO COMMENTS

Letter from the International Boundary and Water Commission of January 15, 1993

Response to Comment - Specific plans and dates will be provided to Mr. Jose Valdez as soon as possible.

United States Department of the Interior

NATIONAL PARK SERVICE
Coronado National Memorial
Rural Route 2, Box 126
Hereford, Arizona 85615

TAKE PRIDE IN AMERICA

IN REPLY REFER TO:

L7619

January 15, 1993

Colonel R.L. VanAntwerp
District Engineer
U.S. Army Corps of Engineers
Los Angeles District
Attn: Ms. Laura Tschudi (CESPL-PD-RL)

Dear Ms. Tschudi:

Thank you for the copy of the Draft Environmental Assessment for the Joint Task Force Six - Naco sent for our review.

Coronado National Memorial was established to commemorate the first major expedition of the American Southwest by Europeans. The location of the Memorial gives visitors a panoramic view of the San Pedro Valley, the route Francisco Vasquez de Coronado is believe to have traveled over 500 years ago. The view of the San Pedro Valley from the overlook at Montezuma Pass is a very popular attraction to park visitors. Therefore, any development in this area will affect the visual value of the overlook. We realize that this border road needs to be maintained in a condition that other agencies can reasonably travel. However, we would like the road kept to a minimal width in order for it not to be as visual to the public. Considering the number of vehicles that will utilize this road, the width of the road in some sections appears to be wider than needed.

Thank you for permitting us to comment on the Draft Environmental Assessment for this project. Should you have any questions on our comments, please do not hesitate to contact me at (602-366-5515).

Sincerely,

Edward Lopez
Superintendent
Coronado National Memorial

RESPONSE TO COMMENTS

Letter from the National Park Service, Coronado National Memorial
Dated January 15, 1993

Response - The road width will not materially change in the project area. Its visual impact will be essentially the same as it is today.

THE STATE OF ARIZONA

GAME & FISH DEPARTMENT

2221 West Greenway Road, Phoenix, Arizona 85023-4399 (602) 942-3000

555 N. Greasewood Rd. Tucson, AZ 85745 (602) 628-5376

January 14, 1993

Colonel R.L. Van Antwerp
District Engineer
U.S. Army Corps of Engineers
Los Angeles District
Attn: Ms. Laura Tschudi (CESPL-PD-RL)
Chief, Environmental Design Section
P.O. Box 2711, Room 6650
Los Angeles, CA 90053-2325

Dear Colonel Van Antwerp:

RE: Draft Environmental Assessment for Border Road Maintenance and Repair, Naco, Cochise Co., Arizona.

The Arizona Game and Fish Department has reviewed the above-referenced Environmental Assessment (EA) dated December 1992, and we provide the following for your consideration.

On November 30, 1992, I was able to inspect the eastern portion of the project site. As indicated in the EA, much of the proposed action will occur within the right-of-way of the existing border road. Apparently this existing road was constructed during 1991 or 1992; however, I am not aware that the Arizona Game and Fish Department was ever contacted regarding the initial construction of this road. I would appreciate it if you could provide a copy of the initial environmental analysis (EA or other document) that was accomplished for this project so that we can complete our file on this project and determine whether any initial environmental commitments have been complied with. This may be sent to my attention at the letterhead address shown above. COMMENT #1

Regarding the current proposed activity, it appears that, based on the conditions that now occur on the project site, the environmental impacts of this activity have been adequately described in the draft EA. Provided the environmental commitments (Section 10.0) are accomplished as described and provided further that activities on the San Pedro National Conservation Area are coordinated with the Bureau of Land Management, San Pedro Area Office, we would concurr with the draft Finding of No Significant Impact. COMMENT #2

I appreciate the opportunity to comment on this proposal. If I can provide additonal information, please contact me at (602) 628-5376.

Sincerely,

Richard A. Gerhart
Habitat Program Manager
Tucson Regional Office

RAG:cs

cc: Dave Walker, Habitat Coordinator
Sam Spiller, U.S. Fish and Wildlife Service
Greg Yuncevich, BLM, San Pedro

RESPONSES TO COMMENTS

Letter from the Arizona Department of Game and Fish
Dated January 14, 1993

Response to Comment 1 - A search was conducted to locate any prior existing environmental documentation, however no materials have been found. A cultural resources report for the initial road construction was located.

Response to Comment 2 - Coordination is ongoing with the BLM, and the environmental commitments will be monitored.

ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY

FIFE SYMINGTON, GOVERNOR
EDWARD Z. FOX, DIRECTOR

WQMS-389.028

January 19, 1992

Colonel R.L. VanAntwerp
District Engineer
U.S. Army Corps of Engineers
Los Angeles District

Attn.: Ms. Laura Tschudi (CESPL-PD-RL)
Chief, Environmental Design Section
P.O. Box 2711, Room 6650
Los Angeles, CA 90053-2325

RE: DRAFT ENVIRONMENTAL ASSESSMENT FOR THE JOINT TASK FORCE SIX - BORDER ROAD MAINTENANCE AND REPAIR, NACO, COCHISE COUNTY, ARIZONA

Dear Colonel VanAntwerp:

The Water Assessment Section of the Arizona Department of Environmental Quality (ADEQ) has concluded our review of the above referenced project relative to water quality impacts. Thank you for giving us the opportunity to review this project prior to implementation. Since we have not been on site as a part of this project review, our comments must be limited to those which could be ascertained in our office from the information you have sent us and information from our files and other available data sources.

A. Comments specific to the text of the EA are as follows:

1. Section 4.1 Road maintenance and repair.: All off-site material sources for the project must have valid and current permits under the Federal Clean Water Act [Sections 402 (NPDES) and 404 (Dredge and Fill)] and the State Aquifer Protection Program, where necessary. Facilities and activities not covered by individual permits under these programs are not exempt from the duty to comply with water quality standards for surface waters and aquifers, and will be subject to compliance action, including possible closure by ADEQ if violation is documented. Other permits pertaining to

400 W Congress St., Suite 433

Tucson, Arizona 85711

air quality may be required for material sources. Ensuring that these sources have valid and current permits is the responsibility of the USACOE.

Be advised that other permits or approvals may be required by County Health Departments, ADEQ, or the U.S. Environmental Protection Agency when the overall project includes a potable water supply, wastewater reuse facilities, or wastewater collection/holding/treatment/disposal facilities.

2. Section 6.3 Water Quality.: There is a large copper mine located near the Mexican town of Cananea which is situated partially in the extreme headwaters of the San Pedro River basin. Documented discharges of contaminants originating from the mine caused widespread pollution of the river in the 1970s and 1980s. All aquatic life was destroyed and many pollutants remained in the streambed sediments for years and may still persist although routine surface water quality monitoring data does not confirm this.

3. Section 6.3 Water Quality.: According to our files, the three surface water quality violations were recorded in the San Pedro River at the Highway 92 bridge (Palominas) during water year 1988 (August, 1988) not during water year 1986-87 as stated in the text. It may also be noted that these violations (turbidity, ammonia and boron) were recorded during a flash flood event. The boron value is suspect and may be the result of sample contamination by the laboratory. Additional violations for turbidity have been noted in water years 1991 and 1992.

4. Section 7.3 Water Quality.: Please elaborate more specifically on what "procedures will be followed to minimize erosion during construction if a rain should occur.".

5. Section 7.5.1 Vegetation c. Borrow area: See comments under A.1. above.

6. Section 8.0 COORDINATION : This project may qualify under a Nationwide 404 Permit but still require state certification by ADEQ. Identify which Nationwide Permit this project qualifies under (by number) and contact Mr. James Matt at (602) 207-4502 to determine whether a state certification is necessary.

7. Section 9.2 Clean Water Act, as amended.: See comments under A.1. above.

8. Section 10.1 under ENVIRONMENTAL COMMITMENTS: When this project is physically commenced at the construction site, ADEQ must be notified within seven days of the start date. When this notification is made, please provide the start date and the name of a contact person to be on site. ADEQ may conduct inspections to determine compliance with state surface water quality standards (A.A.C. R18-11-1). When the project is complete ADEQ must be similarly notified. Notification must be addressed to Melinda Longsworth at ADEQ, 400 West Congress Street, Suite 433, Tucson, Arizona 85701 (602) 628-6740.

9. Section 10.7 under ENVIRONMENTAL COMMITMENTS: "...debris and rock will be removed..." should read "...construction debris and rock will be removed...".

10. Section 10.8 under ENVIRONMENTAL COMMITMENTS: "Debris in washes..." should read "Construction debris in washes...".

11. Appendix B - APPLICANTS RESPONSE TO ARIZONA WATER QUALITY CONTROL COUNCIL POLICY FOR CONSTRUCTION AND RELATED ACTIVITIES IN WATER.....: POLICY (8) is applicable to any watercourse in the project area when it contains water. Thus, the applicants response should be modified to reflect their actions in ephemeral and intermittent washes during flood events.

    Even though no road improvements are planned for the San Pedro River area, additional specifics are needed on what actions will be taken to protect surface water quality at the existing road crossing of the San Pedro River.

B. General comments with regard to the EA are as follows:

1. Please add the following name to the mailing list and coordinate all future projects through this person:

    Mr. Edwin K. Swanson, P.E.
    Arizona Department of Environmental Quality
    Water Assessment Section
    P.O. Box 600
    Phoenix, Arizona 85001-0600
    (602) 207-4501

2. To ensure timely acquisition of a state certification (if necessary, see item A.6. above), ADEQ should be consulted during the initial planning and coordination phase of the project. The person to be contacted is listed in item A.6.

3. ADEQ Nonpoint Source personnel have requested that all EAs acknowledge and make reference to Arizona Executive Orders No. 89-16 and 91-6 which pertain to protection of streams and riparian areas. These Executive Orders are attached for you to use in this EA as well as in all future EAs.

Once again, thank you for giving us the opportunity to review this project.

Sincerely,

Melinda K. Longsworth
Surface Water Hydrologist
Point Source and Monitoring Unit

MKL:mkl

cc: Edwin Swanson
James Matt
James Maston
Larry Stephenson

RESPONSES TO COMMENTS

Letter from the Arizona Department of Environmental Quality
of January 19, 1993

PLEASE NOTE: An "R" has been placed in the lefthand margin of the FEA where items have been changed or added.

Response to Comment A 1 - Most material needs for the project will be fulfilled by borrow material from the on project site. Any additional materials needed would be obtained through the Fort Huachuca Government Contracting Sources. The 404 Permit, per 33 CFR Part 330, has been granted under Nationwide Permit # 14, road crossing. No other permits are required for this project.

Response to Comment A 2 - The text in Section 6.3 has been changed.

Response to Comment A 3 - The text in Section 6.3 has been changed.

Response to Comment A 4 - The text in Section 7.3 has been changed.

Response to Comment A 5 - A recent phone conversation with ADEQ indicates that this comment is no longer valid. Therefore, a response is not required.

Response to Comment A 6 - On January 19, 1993 the Los Angeles District coordinated with Mr. Robert Dummer (COE Regulatory Branch in Phoenix) regarding the 404 permit requirements. Mr. Dummer stated that this project qualifies under 33 CFR Part 330 for a nationwide permit # 14, road crossing, due to the less than one acre being impacted at each wash crossing. On January 20, 1993 COE coordinated with Mr. Jim Matt, of your Phoenix staff, regarding the state 401 water quality certification and he said that when the project qualifies for Nationwide Permit # 14 it is considered to be precertified for the state water quality certification.

Response to Comment A 7 - Same as the response to item A 1 above.

Response to Comment A 8 - The date of construction startup and completion, as well as the name of the contact person will be provided to ADEQ as soon as possible.

Response to Comment A 9 - The text in Section 10.7 has been changed.

Response to Comment A 10 - The text in Section 10.8 has been changed.

Response to Comment A 11 - The text in Policy Section 8 of the 301 Application has been changed.

The San Pedro River will not be crossed by construction equipment. Any equipment that may be needed on the west side of the river will cross via the Arizona Highway 92 bridge north of the project area.

Response to Comment B 1 - This addressee has been added to the Mailing List.

Response to Comment B 2 - An internal error caused a delay in the initial effort to contact the ADEQ. The listed contact has been and will be coordinated with in a timely manner in the future.

Response to Comment B 3 - These Executive Orders have been received and reviewed. E.O. 89-16's subject is "Streams and Riparian Resources". E.O. 91-6's subject is "Protection of Riparian Areas". This project is not impacting any riparian areas. The San Pedro River riparian zone, an especially sensitive area, is not part of this project.

KEITH KELLY
Director

DAN F. RICE
Associate Director

Arizona Department of Agriculture

1688 West Adams, Phoenix, Arizona 85007
(602) 542-4373 FAX (602) 542-0909
PLANT SERVICES DIVISION

January 22, 1993

Ms. Laura Tschudi
Chief, Environmental Design Section
P.O. Box 2711, Room 6650
Los Angeles, CA 90053

Re: Draft EA: Border road maintenance and repair; SASABE, Pima County, NACO, and DOUGLAS, Cochise County, Arizona.

Dear Ms. Tschudi:

The Arizona Department of Agriculture has reviewed the three referenced drafts dated December 1992.

We would appreciate that all protected plant species be considered prior to project development, future road repair and maintenance. The Department will be willing to participate or coordinate any plant salvage efforts. Please keep in mind that for individuals to remove protected native plant from the project area, an application for plant removal and transportation permit must be completed and signed by the land manager or agent.

COMMENT #1

COMMENT #2

Thank you for the opportunity to provide this information. If you need additional information, please contact me at (602) 542-3292.

Sincerely,

Jim McGinnis
Native Plant Law

JM:da

RESPONSES TO COMMENTS

Letter from the Arizona Department of Agriculture
Dated January 22,1993

Response to Comment 1 - The Corps and JTF-6 will continue the established coordination with ADA-Plant Services.

Response to Comment 2 - The Corps does not anticipate the removal of any protected native plants from the Naco project area.